Amendments to the Specification

Please amend the specification as follows:

Please replace the Sequence Listing submitted on October 16, 2006 with the new Sequence Listing submitted herewith.

Please delete the first paragraph at page 1, as amended by way of the Preliminary Amendment filed on March 4, 2002, with the following paragraph:

This application is a divisional application of U.S. application serial no. 09/373,432, filed on August 13, 1999, now U.S. 6,459,996, which claims priority to U.S. Provisional Application No. 60/096,452, filed August 13, 1998. The contents of all of which are hereby incorporated by reference.

Please delete the paragraph on page 7, lines 7-12 and replace it with the following paragraph:

Figure 4: Quanta was used to superimpose *E. coli* UDP-galactose 4 epimerase (GalE) **(SEQ ID NO: 1)** and *E. coli* GDP-fucose synthetase (coli_GFS) **(SEQ ID NO: 2)** as shown in figure 3. The two sequences were then aligned based upon the structural alignment and the human GDP-fucose synthetase (human_GFS) **(SEQ ID NO: 3)** amino acid sequence was aligned to this pair. Identical residues are boxed in red, homologous in grey, and residues shared between two of the three proteins are boxed in blue.

Please replace the paragraph beginning at page 21, after "*Data collection and processing*" with the following paragraph:

Diffraction data were collected using a Raxis II detector mounted on an RU200 X-ray generator running at 50 KV, 100 mA, with the MSC/Yale focusing mirrors. All data collections were performed at 18C with exposure times between 8 and 12 minutes per one degree oscillation. These data were reduced with DENZO/SCALEPACK [44] giving unit cell parameters of a=104.2 Å and c=74.9 Å and symmetry $P3_221$ or $P3_121$. The CCP4 suite of programs [20] were used for all further data processing leading up to heavy atom refinement.

Please replace the paragraph beginning at page 23, after "*Model building and refinement*" with the following paragraph:

The model was built into the experimental maps using QUANTA (Molecular Simulations Inc.). Large pieces of GalE were used to assist with the model building by changing the side chain identities and moving residues and secondary structural elements. The resulting model had no breaks in the backbone and was refined using XPLOR positional, torsion angle dynamics, and B-factor refinement. The final model consists of residues Lys3 to Phe319 with the first and last two residues not visible in the electron density maps. The side chains of Arg36, Asp37, Arg55 and His174 are also disordered and were modeled as alanines in the final structure. The side chains of Arg36 and Asp37 became well ordered upon binding NADP+ or NADPH and were therefore included in those complex models.

Please replace the paragraph beginning at page 23, after "*Obtaining NADP and NADPH bound complexes*" with the following paragraph:

The complex of GFS with NADP+ was obtained by placing the crystals into 4.2M sodium formate, 1 mM NADP+ for 20 hours. The resulting complex was found to be isomorphous with cell parameters a=104.2 Å and c=75.1 Å. After rigid body refinement of the protein model in XPLOR [48] clear density was identified for the bound ligand in both 2Fo-Fc and Fo-Fc electron density maps. A model of the complex was built using QUANTA and side chains were adjusted to fit the new electron density. Refinement of the complex was performed using positional and B-factor refinement in XPLOR, giving a final model with statistics shown below.

Please insert the following text at page 24, after "(entry codes 1GFS, 1FXS, and 1BSV)":

```
HEADER    OXIDOREDUCTASE                          17-AUG-98   1GFS
TITLE     GDP-FUCOSE SYNTHETASE FROM E. COLI
COMPND    MOL_ID: 1;
COMPND   2 MOLECULE: GDP-FUCOSE SYNTHETASE;
COMPND   3 CHAIN: A;
COMPND   4 SYNONYM: WCAG, GDP-4-KETO 6-DEOXY-MANNOSE 3,5-EPIMERASE 4-
COMPND   5 REDUCTASE;
COMPND   6 ENGINEERED: YES
SOURCE    MOL_ID: 1;
SOURCE   2 ORGANISM_SCIENTIFIC: ESCHERICHIA COLI;
SOURCE   3 STRAIN: K12;
SOURCE   4 CELLULAR_LOCATION: CYTOPLASM;
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SOURCE   5 GENE: WCAG;
SOURCE   6 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE   7 EXPRESSION_SYSTEM_STRAIN: BL21;
SOURCE   8 EXPRESSION_SYSTEM_CELLULAR_LOCATION: CYTOPLASM;
SOURCE   9 EXPRESSION_SYSTEM_PLASMID: PSEWCAG;
SOURCE  10 EXPRESSION_SYSTEM_GENE: WCAG
KEYWDS    EPIMERASE-REDUCTASE, NADP, GDP-FUCOSE, LIPOPOLYSACCHARIDE
KEYWDS   2 BIOSYNTHESIS
EXPDTA    X-RAY DIFFRACTION
AUTHOR    W.S.SOMERS,M.L.STAHL,F.X.SULLIVAN
REVDAT   2   12-MAY-00 1GFS    1       HEADER DBREF
REVDAT   1   17-AUG-99 1GFS    0
JRNL        AUTH   W.S.SOMERS,M.L.STAHL,F.X.SULLIVAN
JRNL        TITL   GDP-FUCOSE SYNTHETASE FROM ESCHERICHIA COLI:
JRNL        TITL 2 STRUCTURE OF A UNIQUE MEMBER OF THE SHORT-CHAIN
JRNL        TITL 3 DEHYDROGENASE/REDUCTASE FAMILY THAT CATALYZES TWO
JRNL        TITL 4 DISTINCT REACTIONS AT THE SAME ACTIVE SITE.
JRNL        REF    STRUCTURE                     V.   6  1601 1998
JRNL        REFN   ASTM STRUE6  UK ISSN 0969-2126
REMARK   1
REMARK   2
REMARK   2 RESOLUTION. 2.20 ANGSTROMS.
REMARK   3
REMARK   3 REFINEMENT.
REMARK   3   PROGRAM     : X-PLOR 3.843
REMARK   3   AUTHORS     : BRUNGER
REMARK   3
REMARK   3  DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) : 2.20
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) : 14.00
REMARK   3   DATA CUTOFF            (SIGMA(F)) : 2.000
REMARK   3   DATA CUTOFF HIGH         (ABS(F)) : NULL
REMARK   3   DATA CUTOFF LOW          (ABS(F)) : NULL
REMARK   3   COMPLETENESS (WORKING+TEST)   (%) : 94.8
REMARK   3   NUMBER OF REFLECTIONS             : 22894
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD          : THROUGHOUT
REMARK   3   FREE R VALUE TEST SET SELECTION  : RANDOM
REMARK   3   R VALUE            (WORKING SET) : 0.171
REMARK   3   FREE R VALUE                     : 0.214
REMARK   3   FREE R VALUE TEST SET SIZE   (%) : 5.000
REMARK   3   FREE R VALUE TEST SET COUNT      : NULL
REMARK   3   ESTIMATED ERROR OF FREE R VALUE  : NULL
REMARK   3
REMARK   3  FIT IN THE HIGHEST RESOLUTION BIN.
REMARK   3   TOTAL NUMBER OF BINS USED           : NULL
REMARK   3   BIN RESOLUTION RANGE HIGH       (A) : NULL
REMARK   3   BIN RESOLUTION RANGE LOW        (A) : NULL
REMARK   3   BIN COMPLETENESS (WORKING+TEST) (%) : NULL
REMARK   3   REFLECTIONS IN BIN    (WORKING SET) : NULL
REMARK   3   BIN R VALUE           (WORKING SET) : NULL
REMARK   3   BIN FREE R VALUE                    : NULL
REMARK   3   BIN FREE R VALUE TEST SET SIZE  (%) : NULL
REMARK   3   BIN FREE R VALUE TEST SET COUNT     : NULL
REMARK   3   ESTIMATED ERROR OF BIN FREE R VALUE : NULL
```

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REMARK   3
REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3   PROTEIN ATOMS            : 2489
REMARK   3   NUCLEIC ACID ATOMS       : NULL
REMARK   3   HETEROGEN ATOMS          : NULL
REMARK   3   SOLVENT ATOMS            : 80
REMARK   3
REMARK   3  B VALUES.
REMARK   3   FROM WILSON PLOT           (A**2) : NULL
REMARK   3   MEAN B VALUE      (OVERALL, A**2) : NULL
REMARK   3   OVERALL ANISOTROPIC B VALUE.
REMARK   3    B11 (A**2) : NULL
REMARK   3    B22 (A**2) : NULL
REMARK   3    B33 (A**2) : NULL
REMARK   3    B12 (A**2) : NULL
REMARK   3    B13 (A**2) : NULL
REMARK   3    B23 (A**2) : NULL
REMARK   3
REMARK   3  ESTIMATED COORDINATE ERROR.
REMARK   3   ESD FROM LUZZATI PLOT        (A) : NULL
REMARK   3   ESD FROM SIGMAA              (A) : NULL
REMARK   3   LOW RESOLUTION CUTOFF        (A) : NULL
REMARK   3
REMARK   3  CROSS-VALIDATED ESTIMATED COORDINATE ERROR.
REMARK   3   ESD FROM C-V LUZZATI PLOT    (A) : NULL
REMARK   3   ESD FROM C-V SIGMAA          (A) : NULL
REMARK   3
REMARK   3  RMS DEVIATIONS FROM IDEAL VALUES.
REMARK   3   BOND LENGTHS                 (A) : 0.008
REMARK   3   BOND ANGLES            (DEGREES) : 1.36
REMARK   3   DIHEDRAL ANGLES        (DEGREES) : NULL
REMARK   3   IMPROPER ANGLES        (DEGREES) : NULL
REMARK   3
REMARK   3  ISOTROPIC THERMAL MODEL : NULL
REMARK   3
REMARK   3  ISOTROPIC THERMAL FACTOR RESTRAINTS.    RMS    SIGMA
REMARK   3   MAIN-CHAIN BOND              (A**2) : NULL  ; NULL
REMARK   3   MAIN-CHAIN ANGLE             (A**2) : NULL  ; NULL
REMARK   3   SIDE-CHAIN BOND              (A**2) : NULL  ; NULL
REMARK   3   SIDE-CHAIN ANGLE             (A**2) : NULL  ; NULL
REMARK   3
REMARK   3  NCS MODEL : NULL
REMARK   3
REMARK   3  NCS RESTRAINTS.                         RMS   SIGMA/WEIGHT
REMARK   3   GROUP  1  POSITIONAL             (A) : NULL  ; NULL
REMARK   3   GROUP  1  B-FACTOR           (A**2) : NULL  ; NULL
REMARK   3
REMARK   3  PARAMETER FILE  1  : PARHCSDX.PRO
REMARK   3  PARAMETER FILE  2  : NULL
REMARK   3  TOPOLOGY FILE  1   : TOPHCSDX.PRO
REMARK   3  TOPOLOGY FILE  2   : NULL
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS: NULL
REMARK   4
REMARK   4 1GFS COMPLIES WITH FORMAT V. 3.0, 1-DEC-2006
REMARK   4
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REMARK   4 THIS IS THE REMEDIATED VERSION OF THIS PDB ENTRY.
REMARK   4 REMEDIATED DATA FILE REVISION 3.100 (2007-03-17)
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200  EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200  DATE OF DATA COLLECTION        : FEB-1997
REMARK 200  TEMPERATURE           (KELVIN) : 291.0
REMARK 200  PH                             : 7.00
REMARK 200  NUMBER OF CRYSTALS USED        : 2
REMARK 200
REMARK 200  SYNCHROTRON              (Y/N) : N
REMARK 200  RADIATION SOURCE               : ROTATING ANODE
REMARK 200  BEAMLINE                       : NULL
REMARK 200  X-RAY GENERATOR MODEL          : RIGAKU/MSC RU-H2R
REMARK 200  MONOCHROMATIC OR LAUE    (M/L) : M
REMARK 200  WAVELENGTH OR RANGE        (A) : 1.5418
REMARK 200  MONOCHROMATOR                  : NI FILTER
REMARK 200  OPTICS                         : MIRRORS
REMARK 200
REMARK 200  DETECTOR TYPE                  : IMAGE PLATE AREA DETECTOR
REMARK 200  DETECTOR MANUFACTURER          : RIGAKU
REMARK 200  INTENSITY-INTEGRATION SOFTWARE : DENZO
REMARK 200  DATA SCALING SOFTWARE          : SCALEPACK
REMARK 200
REMARK 200  NUMBER OF UNIQUE REFLECTIONS   : 23163
REMARK 200  RESOLUTION RANGE HIGH      (A) : 2.200
REMARK 200  RESOLUTION RANGE LOW       (A) : 14.000
REMARK 200  REJECTION CRITERIA  (SIGMA(I)) : 0.000
REMARK 200
REMARK 200 OVERALL.
REMARK 200  COMPLETENESS FOR RANGE     (%) : 95.9
REMARK 200  DATA REDUNDANCY                : 9.100
REMARK 200  R MERGE                    (I) : 0.05200
REMARK 200  R SYM                      (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR THE DATA SET  : 33.1000
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.20
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : 2.28
REMARK 200  COMPLETENESS FOR SHELL     (%) : 75.8
REMARK 200  DATA REDUNDANCY IN SHELL       : NULL
REMARK 200  R MERGE FOR SHELL          (I) : NULL
REMARK 200  R SYM FOR SHELL            (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR SHELL         : 4.500
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: MIRAS
REMARK 200 SOFTWARE USED: SHARP, X-PLOR 3.843
REMARK 200 STARTING MODEL: NULL
REMARK 200
REMARK 200 REMARK: NULL
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS   (%): 62.07
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 3.24
REMARK 280
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REMARK 280 CRYSTALLIZATION CONDITIONS: PH 7.00
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 32 2 1
REMARK 290
REMARK 290      SYMOP   SYMMETRY
REMARK 290     NNNMMM   OPERATOR
REMARK 290       1555   X,Y,Z
REMARK 290       2555   -Y,X-Y,2/3+Z
REMARK 290       3555   -X+Y,-X,1/3+Z
REMARK 290       4555   Y,X,-Z
REMARK 290       5555   X-Y,-Y,1/3-Z
REMARK 290       6555   -X,-X+Y,2/3-Z
REMARK 290
REMARK 290     WHERE NNN -> OPERATOR NUMBER
REMARK 290           MMM -> TRANSLATION VECTOR
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY
REMARK 290 RELATED MOLECULES.
REMARK 290   SMTRY1   1  1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY2   1  0.000000  1.000000  0.000000        0.00000
REMARK 290   SMTRY3   1  0.000000  0.000000  1.000000        0.00000
REMARK 290   SMTRY1   2 -0.500000 -0.866025  0.000000        0.00000
REMARK 290   SMTRY2   2  0.866025 -0.500000  0.000000        0.00000
REMARK 290   SMTRY3   2  0.000000  0.000000  1.000000       49.93333
REMARK 290   SMTRY1   3 -0.500000  0.866025  0.000000        0.00000
REMARK 290   SMTRY2   3 -0.866025 -0.500000  0.000000        0.00000
REMARK 290   SMTRY3   3  0.000000  0.000000  1.000000       24.96667
REMARK 290   SMTRY1   4 -0.500000  0.866025  0.000000        0.00000
REMARK 290   SMTRY2   4  0.866025  0.500000  0.000000        0.00000
REMARK 290   SMTRY3   4  0.000000  0.000000 -1.000000        0.00000
REMARK 290   SMTRY1   5  1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY2   5  0.000000 -1.000000  0.000000        0.00000
REMARK 290   SMTRY3   5  0.000000  0.000000 -1.000000       24.96667
REMARK 290   SMTRY1   6 -0.500000 -0.866025  0.000000        0.00000
REMARK 290   SMTRY2   6 -0.866025  0.500000  0.000000        0.00000
REMARK 290   SMTRY3   6  0.000000  0.000000 -1.000000       49.93333
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF 1 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW.  BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE: 1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A
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REMARK 350   BIOMT1   1  1.000000  0.000000  0.000000        0.00000
REMARK 350   BIOMT2   1  0.000000  1.000000  0.000000        0.00000
REMARK 350   BIOMT3   1  0.000000  0.000000  1.000000        0.00000
REMARK 350   BIOMT1   2 -0.500000  0.866025  0.000000        0.00000
REMARK 350   BIOMT2   2  0.866025  0.500000  0.000000        0.00000
REMARK 350   BIOMT3   2  0.000000  0.000000 -1.000000        0.00000
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465   M RES C SSSEQI
REMARK 465     MET A     1
REMARK 465     SER A     2
REMARK 465     ARG A   320
REMARK 465     GLY A   321
REMARK 470
REMARK 470 MISSING ATOM
REMARK 470 THE FOLLOWING RESIDUES HAVE MISSING ATOMS(M=MODEL NUMBER;
REMARK 470 RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE NUMBER;
REMARK 470 I=INSERTION CODE):
REMARK 470   M RES CSSEQI  ATOMS
REMARK 470     ARG A  36    CG    CD    NE    CZ    NH1   NH2
REMARK 470     ASP A  37    CG    OD1   OD2
REMARK 470     ARG A  45    CG    CD    NE    CZ    NH1   NH2
REMARK 470     ARG A  55    CG    CD    NE    CZ    NH1   NH2
REMARK 470     HIS A 174    CG    ND1   CD2   CE1   NE2
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,2(A3,1X,A1,I4,A1,1X,A4,3X),F6.3)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   RES CSSEQI ATM2   DEVIATION
REMARK 500    MET A 162   SD    MET A 162   CE    -0.084
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
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REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   ATM2   ATM3
REMARK 500    VAL A  32   N    -  CA  -  C   ANGL. DEV. = -8.5 DEGREES
REMARK 500    LYS A  65   N    -  CA  -  C   ANGL. DEV. =-10.2 DEGREES
REMARK 500    ASP A  98   N    -  CA  -  C   ANGL. DEV. = 10.5 DEGREES
REMARK 500    VAL A  99   N    -  CA  -  C   ANGL. DEV. = -9.0 DEGREES
REMARK 500    LEU A 240   N    -  CA  -  C   ANGL. DEV. = -8.9 DEGREES
REMARK 500    SER A 241   N    -  CA  -  C   ANGL. DEV. =  9.3 DEGREES
REMARK 500    ASP A 286   N    -  CA  -  C   ANGL. DEV. =-10.6 DEGREES
REMARK 525
REMARK 525 SOLVENT
REMARK 525 THE FOLLOWING SOLVENT MOLECULES LIE FARTHER THAN EXPECTED
REMARK 525 FROM THE PROTEIN OR NUCLEIC ACID MOLECULE AND MAY BE
REMARK 525 ASSOCIATED WITH A SYMMETRY RELATED MOLECULE (M=MODEL
REMARK 525 NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE
REMARK 525 NUMBER; I=INSERTION CODE):
REMARK 525
REMARK 525  M RES CSSEQI
REMARK 525    HOH    20        DISTANCE =  5.47 ANGSTROMS
REMARK 525    HOH    27        DISTANCE =  6.07 ANGSTROMS
REMARK 525    HOH    59        DISTANCE =  5.04 ANGSTROMS
REMARK 525    HOH    76        DISTANCE =  5.01 ANGSTROMS
DBREF  1GFS A    1   321  UNP    P32055   FCL_ECOLI        1    321
SEQRES   1 A  321  MET SER LYS GLN ARG VAL PHE ILE ALA GLY HIS ARG GLY
SEQRES   2 A  321  MET VAL GLY SER ALA ILE ARG ARG GLN LEU GLU GLN ARG
SEQRES   3 A  321  GLY ASP VAL GLU LEU VAL LEU ARG THR ARG ASP GLU LEU
SEQRES   4 A  321  ASN LEU LEU ASP SER ARG ALA VAL HIS ASP PHE PHE ALA
SEQRES   5 A  321  SER GLU ARG ILE ASP GLN VAL TYR LEU ALA ALA ALA LYS
SEQRES   6 A  321  VAL GLY GLY ILE VAL ALA ASN ASN THR TYR PRO ALA ASP
SEQRES   7 A  321  PHE ILE TYR GLN ASN MET MET ILE GLU SER ASN ILE ILE
SEQRES   8 A  321  HIS ALA ALA HIS GLN ASN ASP VAL ASN LYS LEU LEU PHE
SEQRES   9 A  321  LEU GLY SER SER CYS ILE TYR PRO LYS LEU ALA LYS GLN
SEQRES  10 A  321  PRO MET ALA GLU SER GLU LEU LEU GLN GLY THR LEU GLU
SEQRES  11 A  321  PRO THR ASN GLU PRO TYR ALA ILE ALA LYS ILE ALA GLY
SEQRES  12 A  321  ILE LYS LEU CYS GLU SER TYR ASN ARG GLN TYR GLY ARG
SEQRES  13 A  321  ASP TYR ARG SER VAL MET PRO THR ASN LEU TYR GLY PRO
SEQRES  14 A  321  HIS ASP ASN PHE HIS PRO SER ASN SER HIS VAL ILE PRO
SEQRES  15 A  321  ALA LEU LEU ARG ARG PHE HIS GLU ALA THR ALA GLN ASN
SEQRES  16 A  321  ALA PRO ASP VAL VAL VAL TRP GLY SER GLY THR PRO MET
SEQRES  17 A  321  ARG GLU PHE LEU HIS VAL ASP ASP MET ALA ALA ALA SER
SEQRES  18 A  321  ILE HIS VAL MET GLU LEU ALA HIS GLU VAL TRP LEU GLU
SEQRES  19 A  321  ASN THR GLN PRO MET LEU SER HIS ILE ASN VAL GLY THR
SEQRES  20 A  321  GLY VAL ASP CYS THR ILE ARG GLU LEU ALA GLN THR ILE
SEQRES  21 A  321  ALA LYS VAL VAL GLY TYR LYS GLY ARG VAL VAL PHE ASP
SEQRES  22 A  321  ALA SER LYS PRO ASP GLY THR PRO ARG LYS LEU LEU ASP
SEQRES  23 A  321  VAL THR ARG LEU HIS GLN LEU GLY TRP TYR HIS GLU ILE
SEQRES  24 A  321  SER LEU GLU ALA GLY LEU ALA SER THR TYR GLN TRP PHE
SEQRES  25 A  321  LEU GLU ASN GLN ASP ARG PHE ARG GLY
FORMUL   2  HOH   *80(H2 O)
HELIX    1   1 MET A   14  LEU A   23  1                                  10
HELIX    2   2 SER A   44  SER A   53  1                                  10
HELIX    3   3 ILE A   69  THR A   74  1                                   6
HELIX    4   4 PRO A   76  ASN A   97  1                                  22
HELIX    5   5 SER A  108  ILE A  110  5                                   3
HELIX    6   6 GLU A  121  GLU A  123  5                                   3
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HELIX    7   7 PRO A  131  TYR A  154  5                                    24
HELIX    8   8 VAL A  180  ALA A  193  1                                    14
HELIX    9   9 VAL A  214  GLU A  226  1                                    13
HELIX   10  10 HIS A  229  ASN A  235  1                                     7
HELIX   11  11 ILE A  253  VAL A  264  1                                    12
HELIX   12  12 THR A  288  GLN A  292  1                                     5
HELIX   13  13 LEU A  301  ASN A  315  1                                    15
SHEET    1   A 6 VAL A  29  VAL A  32  0
SHEET    2   A 6 GLN A   4  ALA A   9  1  N  GLN A   4   O  GLU A  30
SHEET    3   A 6 GLN A  58  LEU A  61  1  N  GLN A  58   O  PHE A   7
SHEET    4   A 6 LYS A 101  LEU A 105  1  N  LYS A 101   O  VAL A  59
SHEET    5   A 6 ASP A 157  PRO A 163  1  N  ASP A 157   O  LEU A 102
SHEET    6   A 6 ILE A 243  VAL A 245  1  N  ILE A 243   O  MET A 162
SHEET    1   B 2 ASN A 165  TYR A 167  0
SHEET    2   B 2 PHE A 211  HIS A 213  1  N  LEU A 212   O  ASN A 165
SHEET    1   C 2 ASP A 198  TRP A 202  0
SHEET    2   C 2 ARG A 269  ASP A 273  1  N  ARG A 269   O  VAL A 199
CISPEP   1 GLN A  117    PRO A  118          0        -0.01
CRYST1  104.200  104.200   74.900  90.00  90.00 120.00 P 32 2 1      6
ORIGX1      1.000000  0.000000  0.000000        0.00000
ORIGX2      0.000000  1.000000  0.000000        0.00000
ORIGX3      0.000000  0.000000  1.000000        0.00000
SCALE1      0.009597  0.005541  0.000000        0.00000
SCALE2      0.000000  0.011082  0.000000        0.00000
SCALE3      0.000000  0.000000  0.013351        0.00000
ATOM      1  N   LYS A   3       8.638  27.135  31.412  1.00 63.69           N
ATOM      2  CA  LYS A   3      10.030  26.762  31.005  1.00 63.70           C
ATOM      3  C   LYS A   3      10.303  26.932  29.499  1.00 61.20           C
ATOM      4  O   LYS A   3       9.823  26.153  28.666  1.00 62.34           O
ATOM      5  CB  LYS A   3      10.346  25.326  31.425  1.00 64.19           C
ATOM      6  CG  LYS A   3      11.727  24.876  30.987  1.00 67.25           C
ATOM      7  CD  LYS A   3      12.029  23.465  31.428  1.00 69.90           C
ATOM      8  CE  LYS A   3      12.180  23.385  32.930  1.00 71.80           C
ATOM      9  NZ  LYS A   3      12.644  22.036  33.349  1.00 74.38           N
ATOM     10  N   GLN A   4      11.128  27.925  29.178  1.00 55.75           N
ATOM     11  CA  GLN A   4      11.511  28.256  27.809  1.00 48.96           C
ATOM     12  C   GLN A   4      12.167  27.114  27.033  1.00 44.63           C
ATOM     13  O   GLN A   4      13.183  26.574  27.463  1.00 44.81           O
ATOM     14  CB  GLN A   4      12.477  29.437  27.848  1.00 50.16           C
ATOM     15  CG  GLN A   4      12.032  30.632  27.042  1.00 59.37           C
ATOM     16  CD  GLN A   4      10.678  31.145  27.464  1.00 59.21           C
ATOM     17  OE1 GLN A   4       9.836  31.461  26.627  1.00 60.76           O
ATOM     18  NE2 GLN A   4      10.455  31.225  28.770  1.00 63.49           N
ATOM     19  N   ARG A   5      11.579  26.735  25.902  1.00 39.05           N
ATOM     20  CA  ARG A   5      12.150  25.683  25.061  1.00 38.52           C
ATOM     21  C   ARG A   5      13.005  26.343  23.972  1.00 38.10           C
ATOM     22  O   ARG A   5      12.485  27.013  23.074  1.00 35.18           O
ATOM     23  CB  ARG A   5      11.057  24.802  24.457  1.00 40.70           C
ATOM     24  CG  ARG A   5      10.475  23.809  25.448  1.00 43.17           C
ATOM     25  CD  ARG A   5       9.263  23.067  24.887  1.00 47.94           C
ATOM     26  NE  ARG A   5       9.537  22.290  23.672  1.00 49.82           N
ATOM     27  CZ  ARG A   5      10.174  21.117  23.634  1.00 50.55           C
ATOM     28  NH1 ARG A   5      10.633  20.558  24.747  1.00 48.77           N
ATOM     29  NH2 ARG A   5      10.308  20.473  22.480  1.00 47.62           N
ATOM     30  N   VAL A   6      14.321  26.151  24.078  1.00 35.15           N
ATOM     31  CA  VAL A   6      15.287  26.752  23.164  1.00 32.66           C
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ATOM     32  C   VAL A   6      15.959  25.813  22.163  1.00 33.57           C
ATOM     33  O   VAL A   6      16.476  24.758  22.530  1.00 34.23           O
ATOM     34  CB  VAL A   6      16.383  27.474  23.966  1.00 29.88           C
ATOM     35  CG1 VAL A   6      17.384  28.131  23.041  1.00 27.61           C
ATOM     36  CG2 VAL A   6      15.750  28.508  24.882  1.00 31.72           C
ATOM     37  N   PHE A   7      15.934  26.207  20.891  1.00 31.96           N
ATOM     38  CA  PHE A   7      16.578  25.441  19.827  1.00 30.72           C
ATOM     39  C   PHE A   7      17.858  26.156  19.450  1.00 28.83           C
ATOM     40  O   PHE A   7      17.829  27.336  19.120  1.00 29.46           O
ATOM     41  CB  PHE A   7      15.701  25.355  18.574  1.00 27.48           C
ATOM     42  CG  PHE A   7      16.390  24.723  17.378  1.00 27.78           C
ATOM     43  CD1 PHE A   7      17.127  23.545  17.511  1.00 26.89           C
ATOM     44  CD2 PHE A   7      16.266  25.286  16.108  1.00 25.21           C
ATOM     45  CE1 PHE A   7      17.721  22.931  16.397  1.00 24.47           C
ATOM     46  CE2 PHE A   7      16.854  24.682  14.992  1.00 27.28           C
ATOM     47  CZ  PHE A   7      17.582  23.502  15.137  1.00 25.91           C
ATOM     48  N   ILE A   8      18.978  25.449  19.548  1.00 27.27           N
ATOM     49  CA  ILE A   8      20.261  26.004  19.159  1.00 26.85           C
ATOM     50  C   ILE A   8      20.664  25.231  17.920  1.00 25.72           C
ATOM     51  O   ILE A   8      20.927  24.030  17.996  1.00 28.54           O
ATOM     52  CB  ILE A   8      21.339  25.824  20.236  1.00 28.61           C
ATOM     53  CG1 ILE A   8      20.924  26.528  21.531  1.00 27.20           C
ATOM     54  CG2 ILE A   8      22.656  26.412  19.740  1.00 30.46           C
ATOM     55  CD1 ILE A   8      21.841  26.255  22.693  1.00 25.47           C
ATOM     56  N   ALA A   9      20.563  25.888  16.766  1.00 26.91           N
ATOM     57  CA  ALA A   9      20.932  25.285  15.490  1.00 26.06           C
ATOM     58  C   ALA A   9      22.455  25.247  15.454  1.00 28.04           C
ATOM     59  O   ALA A   9      23.101  26.226  15.825  1.00 31.13           O
ATOM     60  CB  ALA A   9      20.402  26.121  14.334  1.00 24.74           C
ATOM     61  N   GLY A  10      23.025  24.117  15.041  1.00 26.12           N
ATOM     62  CA  GLY A  10      24.471  23.993  14.990  1.00 24.64           C
ATOM     63  C   GLY A  10      25.111  24.033  16.365  1.00 27.50           C
ATOM     64  O   GLY A  10      26.094  24.739  16.569  1.00 29.10           O
ATOM     65  N   HIS A  11      24.575  23.253  17.301  1.00 27.97           N
ATOM     66  CA  HIS A  11      25.087  23.218  18.674  1.00 29.42           C
ATOM     67  C   HIS A  11      26.460  22.553  18.841  1.00 31.84           C
ATOM     68  O   HIS A  11      27.048  22.635  19.917  1.00 33.18           O
ATOM     69  CB  HIS A  11      24.073  22.541  19.604  1.00 29.13           C
ATOM     70  CG  HIS A  11      23.772  21.127  19.222  1.00 29.64           C
ATOM     71  ND1 HIS A  11      24.236  20.048  19.942  1.00 32.30           N
ATOM     72  CD2 HIS A  11      23.139  20.616  18.141  1.00 28.85           C
ATOM     73  CE1 HIS A  11      23.911  18.932  19.314  1.00 31.82           C
ATOM     74  NE2 HIS A  11      23.245  19.250  18.218  1.00 33.11           N
ATOM     75  N   ARG A  12      26.950  21.874  17.804  1.00 33.76           N
ATOM     76  CA  ARG A  12      28.260  21.212  17.863  1.00 36.95           C
ATOM     77  C   ARG A  12      29.391  22.135  17.399  1.00 36.39           C
ATOM     78  O   ARG A  12      30.560  21.871  17.676  1.00 39.06           O
ATOM     79  CB  ARG A  12      28.277  19.923  17.024  1.00 41.58           C
ATOM     80  CG  ARG A  12      27.392  18.791  17.534  1.00 52.37           C
ATOM     81  CD  ARG A  12      28.027  18.059  18.706  1.00 67.26           C
ATOM     82  NE  ARG A  12      27.026  17.385  19.539  1.00 81.37           N
ATOM     83  CZ  ARG A  12      26.512  16.178  19.289  1.00 88.55           C
ATOM     84  NH1 ARG A  12      26.918  15.481  18.226  1.00 88.92           N
ATOM     85  NH2 ARG A  12      25.596  15.661  20.113  1.00 89.14           N
ATOM     86  N   GLY A  13      29.049  23.201  16.677  1.00 32.93           N
ATOM     87  CA  GLY A  13      30.062  24.133  16.212  1.00 27.83           C
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ATOM     88  C   GLY A  13      30.656  24.881  17.389  1.00 29.13           C
ATOM     89  O   GLY A  13      30.199  24.718  18.519  1.00 30.32           O
ATOM     90  N   MET A  14      31.653  25.721  17.123  1.00 30.53           N
ATOM     91  CA  MET A  14      32.325  26.489  18.164  1.00 29.74           C
ATOM     92  C   MET A  14      31.411  27.434  18.955  1.00 31.04           C
ATOM     93  O   MET A  14      31.404  27.401  20.194  1.00 29.51           O
ATOM     94  CB  MET A  14      33.520  27.260  17.580  1.00 28.97           C
ATOM     95  CG  MET A  14      34.300  28.032  18.643  1.00 33.10           C
ATOM     96  SD  MET A  14      35.783  28.899  18.083  1.00 37.82           S
ATOM     97  CE  MET A  14      35.166  29.755  16.680  1.00 33.36           C
ATOM     98  N   VAL A  15      30.671  28.295  18.254  1.00 32.83           N
ATOM     99  CA  VAL A  15      29.765  29.233  18.932  1.00 34.63           C
ATOM    100  C   VAL A  15      28.514  28.541  19.464  1.00 31.98           C
ATOM    101  O   VAL A  15      28.062  28.849  20.569  1.00 32.10           O
ATOM    102  CB  VAL A  15      29.331  30.425  18.028  1.00 35.96           C
ATOM    103  CG1 VAL A  15      30.443  31.439  17.926  1.00 39.96           C
ATOM    104  CG2 VAL A  15      28.958  29.935  16.652  1.00 39.12           C
ATOM    105  N   GLY A  16      27.962  27.619  18.673  1.00 28.03           N
ATOM    106  CA  GLY A  16      26.775  26.896  19.084  1.00 25.66           C
ATOM    107  C   GLY A  16      26.998  26.179  20.399  1.00 28.28           C
ATOM    108  O   GLY A  16      26.206  26.332  21.331  1.00 25.01           O
ATOM    109  N   SER A  17      28.103  25.434  20.486  1.00 29.42           N
ATOM    110  CA  SER A  17      28.447  24.679  21.692  1.00 29.07           C
ATOM    111  C   SER A  17      28.710  25.568  22.905  1.00 27.94           C
ATOM    112  O   SER A  17      28.412  25.183  24.037  1.00 28.82           O
ATOM    113  CB  SER A  17      29.637  23.749  21.431  1.00 27.99           C
ATOM    114  OG  SER A  17      30.827  24.475  21.214  1.00 35.45           O
ATOM    115  N   ALA A  18      29.253  26.761  22.665  1.00 27.14           N
ATOM    116  CA  ALA A  18      29.525  27.703  23.744  1.00 25.48           C
ATOM    117  C   ALA A  18      28.216  28.202  24.330  1.00 28.55           C
ATOM    118  O   ALA A  18      28.116  28.396  25.539  1.00 33.37           O
ATOM    119  CB  ALA A  18      30.352  28.874  23.243  1.00 24.37           C
ATOM    120  N   ILE A  19      27.224  28.444  23.467  1.00 29.59           N
ATOM    121  CA  ILE A  19      25.904  28.909  23.907  1.00 28.30           C
ATOM    122  C   ILE A  19      25.221  27.775  24.678  1.00 27.99           C
ATOM    123  O   ILE A  19      24.645  28.003  25.741  1.00 27.68           O
ATOM    124  CB  ILE A  19      25.024  29.387  22.705  1.00 27.11           C
ATOM    125  CG1 ILE A  19      25.584  30.701  22.147  1.00 26.95           C
ATOM    126  CG2 ILE A  19      23.558  29.593  23.133  1.00 23.47           C
ATOM    127  CD1 ILE A  19      24.944  31.133  20.837  1.00 28.67           C
ATOM    128  N   ARG A  20      25.350  26.552  24.167  1.00 29.60           N
ATOM    129  CA  ARG A  20      24.769  25.385  24.808  1.00 33.02           C
ATOM    130  C   ARG A  20      25.358  25.188  26.205  1.00 36.45           C
ATOM    131  O   ARG A  20      24.617  25.038  27.174  1.00 39.89           O
ATOM    132  CB  ARG A  20      24.975  24.140  23.951  1.00 32.65           C
ATOM    133  CG  ARG A  20      24.330  22.910  24.536  1.00 37.53           C
ATOM    134  CD  ARG A  20      25.340  22.048  25.262  1.00 44.67           C
ATOM    135  NE  ARG A  20      25.863  21.010  24.382  1.00 51.97           N
ATOM    136  CZ  ARG A  20      25.325  19.796  24.254  1.00 57.93           C
ATOM    137  NH1 ARG A  20      24.254  19.459  24.964  1.00 56.61           N
ATOM    138  NH2 ARG A  20      25.819  18.930  23.370  1.00 59.30           N
ATOM    139  N   ARG A  21      26.683  25.258  26.321  1.00 37.02           N
ATOM    140  CA  ARG A  21      27.348  25.095  27.614  1.00 35.98           C
ATOM    141  C   ARG A  21      26.784  26.018  28.683  1.00 36.94           C
ATOM    142  O   ARG A  21      26.590  25.606  29.826  1.00 37.25           O
ATOM    143  CB  ARG A  21      28.857  25.329  27.493  1.00 33.18           C
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ATOM    144  CG  ARG A  21      29.652  24.084  27.159  1.00 32.74           C
ATOM    145  CD  ARG A  21      31.124  24.417  27.004  1.00 33.70           C
ATOM    146  NE  ARG A  21      31.501  24.602  25.601  1.00 40.07           N
ATOM    147  CZ  ARG A  21      32.183  25.644  25.140  1.00 37.51           C
ATOM    148  NH1 ARG A  21      32.562  26.602  25.973  1.00 41.99           N
ATOM    149  NH2 ARG A  21      32.508  25.719  23.852  1.00 47.55           N
ATOM    150  N   GLN A  22      26.495  27.257  28.304  1.00 38.54           N
ATOM    151  CA  GLN A  22      25.965  28.227  29.251  1.00 42.06           C
ATOM    152  C   GLN A  22      24.483  28.132  29.571  1.00 43.56           C
ATOM    153  O   GLN A  22      24.067  28.550  30.656  1.00 44.96           O
ATOM    154  CB  GLN A  22      26.300  29.644  28.816  1.00 43.53           C
ATOM    155  CG  GLN A  22      27.432  30.225  29.604  1.00 49.02           C
ATOM    156  CD  GLN A  22      27.827  31.577  29.101  1.00 51.28           C
ATOM    157  OE1 GLN A  22      28.853  31.726  28.429  1.00 54.83           O
ATOM    158  NE2 GLN A  22      27.016  32.581  29.410  1.00 53.38           N
ATOM    159  N   LEU A  23      23.686  27.627  28.630  1.00 42.24           N
ATOM    160  CA  LEU A  23      22.247  27.498  28.856  1.00 45.31           C
ATOM    161  C   LEU A  23      21.929  26.205  29.595  1.00 48.09           C
ATOM    162  O   LEU A  23      20.913  26.097  30.285  1.00 49.11           O
ATOM    163  CB  LEU A  23      21.459  27.571  27.543  1.00 38.67           C
ATOM    164  CG  LEU A  23      21.417  28.917  26.810  1.00 38.41           C
ATOM    165  CD1 LEU A  23      20.543  28.779  25.581  1.00 33.70           C
ATOM    166  CD2 LEU A  23      20.893  30.028  27.706  1.00 34.23           C
ATOM    167  N   GLU A  24      22.812  25.228  29.453  1.00 50.02           N
ATOM    168  CA  GLU A  24      22.648  23.953  30.119  1.00 55.08           C
ATOM    169  C   GLU A  24      22.766  24.171  31.623  1.00 58.31           C
ATOM    170  O   GLU A  24      22.203  23.417  32.412  1.00 60.07           O
ATOM    171  CB  GLU A  24      23.741  23.010  29.660  1.00 56.46           C
ATOM    172  CG  GLU A  24      23.284  21.598  29.457  1.00 62.85           C
ATOM    173  CD  GLU A  24      24.188  20.858  28.494  1.00 68.54           C
ATOM    174  OE1 GLU A  24      25.434  20.984  28.611  1.00 68.44           O
ATOM    175  OE2 GLU A  24      23.646  20.168  27.601  1.00 71.01           O
ATOM    176  N   GLN A  25      23.480  25.230  32.002  1.00 62.78           N
ATOM    177  CA  GLN A  25      23.708  25.591  33.401  1.00 66.52           C
ATOM    178  C   GLN A  25      22.584  26.446  34.017  1.00 68.64           C
ATOM    179  O   GLN A  25      22.841  27.435  34.713  1.00 69.85           O
ATOM    180  CB  GLN A  25      25.067  26.294  33.535  1.00 68.27           C
ATOM    181  CG  GLN A  25      26.230  25.457  32.999  1.00 75.90           C
ATOM    182  CD  GLN A  25      27.576  26.174  33.052  1.00 80.72           C
ATOM    183  OE1 GLN A  25      28.381  25.943  33.960  1.00 83.61           O
ATOM    184  NE2 GLN A  25      27.837  27.026  32.059  1.00 81.04           N
ATOM    185  N   ARG A  26      21.342  26.084  33.703  1.00 68.37           N
ATOM    186  CA  ARG A  26      20.148  26.753  34.225  1.00 68.33           C
ATOM    187  C   ARG A  26      18.887  25.974  33.854  1.00 69.03           C
ATOM    188  O   ARG A  26      18.695  25.567  32.702  1.00 68.90           O
ATOM    189  CB  ARG A  26      20.062  28.232  33.812  1.00 66.09           C
ATOM    190  CG  ARG A  26      20.688  28.591  32.482  1.00 61.10           C
ATOM    191  CD  ARG A  26      20.697  30.093  32.295  1.00 54.67           C
ATOM    192  NE  ARG A  26      19.376  30.591  31.935  1.00 49.99           N
ATOM    193  CZ  ARG A  26      19.156  31.731  31.285  1.00 48.55           C
ATOM    194  NH1 ARG A  26      20.169  32.512  30.929  1.00 46.71           N
ATOM    195  NH2 ARG A  26      17.924  32.058  30.931  1.00 45.62           N
ATOM    196  N   GLY A  27      18.054  25.742  34.865  1.00 69.57           N
ATOM    197  CA  GLY A  27      16.836  24.970  34.698  1.00 68.44           C
ATOM    198  C   GLY A  27      15.594  25.667  34.189  1.00 68.23           C
ATOM    199  O   GLY A  27      14.550  25.015  34.049  1.00 67.27           O
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ATOM    200  N   ASP A  28      15.677  26.976  33.947  1.00 66.57           N
ATOM    201  CA  ASP A  28      14.526  27.723  33.428  1.00 64.96           C
ATOM    202  C   ASP A  28      14.480  27.641  31.902  1.00 62.04           C
ATOM    203  O   ASP A  28      13.654  28.287  31.246  1.00 62.38           O
ATOM    204  CB  ASP A  28      14.551  29.190  33.898  1.00 65.86           C
ATOM    205  CG  ASP A  28      15.742  29.973  33.364  1.00 64.56           C
ATOM    206  OD1 ASP A  28      16.836  29.389  33.199  1.00 66.57           O
ATOM    207  OD2 ASP A  28      15.581  31.190  33.131  1.00 64.68           O
ATOM    208  N   VAL A  29      15.354  26.796  31.360  1.00 57.04           N
ATOM    209  CA  VAL A  29      15.480  26.588  29.929  1.00 52.45           C
ATOM    210  C   VAL A  29      15.607  25.103  29.624  1.00 49.25           C
ATOM    211  O   VAL A  29      16.343  24.383  30.295  1.00 51.07           O
ATOM    212  CB  VAL A  29      16.747  27.313  29.393  1.00 52.99           C
ATOM    213  CG1 VAL A  29      17.004  26.954  27.935  1.00 50.80           C
ATOM    214  CG2 VAL A  29      16.607  28.826  29.567  1.00 48.36           C
ATOM    215  N   GLU A  30      14.891  24.654  28.604  1.00 46.94           N
ATOM    216  CA  GLU A  30      14.951  23.262  28.187  1.00 47.71           C
ATOM    217  C   GLU A  30      15.441  23.272  26.745  1.00 45.06           C
ATOM    218  O   GLU A  30      14.782  23.830  25.869  1.00 46.43           O
ATOM    219  CB  GLU A  30      13.568  22.626  28.263  1.00 54.26           C
ATOM    220  CG  GLU A  30      13.593  21.106  28.209  1.00 64.02           C
ATOM    221  CD  GLU A  30      12.299  20.513  27.669  1.00 70.53           C
ATOM    222  OE1 GLU A  30      11.205  21.056  27.972  1.00 74.04           O
ATOM    223  OE2 GLU A  30      12.387  19.505  26.928  1.00 73.01           O
ATOM    224  N   LEU A  31      16.582  22.636  26.499  1.00 40.76           N
ATOM    225  CA  LEU A  31      17.186  22.612  25.166  1.00 38.48           C
ATOM    226  C   LEU A  31      16.707  21.543  24.187  1.00 37.80           C
ATOM    227  O   LEU A  31      16.619  20.369  24.521  1.00 39.58           O
ATOM    228  CB  LEU A  31      18.710  22.522  25.289  1.00 37.82           C
ATOM    229  CG  LEU A  31      19.434  23.609  26.082  1.00 35.92           C
ATOM    230  CD1 LEU A  31      20.875  23.218  26.220  1.00 40.39           C
ATOM    231  CD2 LEU A  31      19.317  24.952  25.398  1.00 37.04           C
ATOM    232  N   VAL A  32      16.410  21.969  22.964  1.00 37.61           N
ATOM    233  CA  VAL A  32      15.983  21.065  21.901  1.00 36.80           C
ATOM    234  C   VAL A  32      17.160  21.108  20.933  1.00 39.39           C
ATOM    235  O   VAL A  32      17.487  22.166  20.397  1.00 41.93           O
ATOM    236  CB  VAL A  32      14.699  21.575  21.204  1.00 36.86           C
ATOM    237  CG1 VAL A  32      14.282  20.624  20.086  1.00 30.23           C
ATOM    238  CG2 VAL A  32      13.575  21.741  22.228  1.00 31.98           C
ATOM    239  N   LEU A  33      17.837  19.977  20.768  1.00 39.48           N
ATOM    240  CA  LEU A  33      19.011  19.904  19.903  1.00 36.25           C
ATOM    241  C   LEU A  33      18.898  18.785  18.881  1.00 38.55           C
ATOM    242  O   LEU A  33      18.383  17.703  19.179  1.00 39.14           O
ATOM    243  CB  LEU A  33      20.268  19.694  20.754  1.00 34.99           C
ATOM    244  CG  LEU A  33      20.485  20.638  21.945  1.00 34.65           C
ATOM    245  CD1 LEU A  33      21.741  20.219  22.683  1.00 32.95           C
ATOM    246  CD2 LEU A  33      20.586  22.098  21.494  1.00 32.49           C
ATOM    247  N   ARG A  34      19.398  19.046  17.679  1.00 38.68           N
ATOM    248  CA  ARG A  34      19.356  18.074  16.601  1.00 40.14           C
ATOM    249  C   ARG A  34      20.712  18.083  15.931  1.00 43.00           C
ATOM    250  O   ARG A  34      21.301  19.144  15.775  1.00 45.35           O
ATOM    251  CB  ARG A  34      18.288  18.484  15.591  1.00 41.19           C
ATOM    252  CG  ARG A  34      17.129  17.524  15.456  1.00 44.68           C
ATOM    253  CD  ARG A  34      16.708  17.011  16.798  1.00 46.21           C
ATOM    254  NE  ARG A  34      15.287  16.711  16.855  1.00 46.21           N
ATOM    255  CZ  ARG A  34      14.566  16.795  17.967  1.00 49.07           C
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ATOM    256  NH1 ARG A  34      15.140  17.161  19.109  1.00 48.00           N
ATOM    257  NH2 ARG A  34      13.262  16.565  17.930  1.00 49.48           N
ATOM    258  N   THR A  35      21.243  16.908  15.604  1.00 44.95           N
ATOM    259  CA  THR A  35      22.537  16.836  14.923  1.00 47.44           C
ATOM    260  C   THR A  35      22.288  16.977  13.423  1.00 49.58           C
ATOM    261  O   THR A  35      21.150  16.829  12.968  1.00 48.67           O
ATOM    262  CB  THR A  35      23.292  15.497  15.189  1.00 46.23           C
ATOM    263  OG1 THR A  35      22.553  14.390  14.642  1.00 46.62           O
ATOM    264  CG2 THR A  35      23.528  15.299  16.683  1.00 41.97           C
ATOM    265  N   ARG A  36      23.344  17.270  12.662  1.00 51.19           N
ATOM    266  CA  ARG A  36      23.230  17.425  11.212  1.00 51.67           C
ATOM    267  C   ARG A  36      22.659  16.159  10.586  1.00 50.62           C
ATOM    268  O   ARG A  36      22.014  16.210   9.536  1.00 52.39           O
ATOM    269  CB  ARG A  36      24.589  17.756  10.603  1.00 52.88           C
ATOM    270  N   ASP A  37      22.893  15.027  11.245  1.00 51.21           N
ATOM    271  CA  ASP A  37      22.392  13.742  10.774  1.00 51.44           C
ATOM    272  C   ASP A  37      20.904  13.612  11.112  1.00 50.79           C
ATOM    273  O   ASP A  37      20.139  13.052  10.326  1.00 53.29           O
ATOM    274  CB  ASP A  37      23.194  12.593  11.397  1.00 54.47           C
ATOM    275  N   GLU A  38      20.495  14.143  12.266  1.00 47.78           N
ATOM    276  CA  GLU A  38      19.092  14.091  12.688  1.00 46.26           C
ATOM    277  C   GLU A  38      18.207  15.099  11.945  1.00 44.99           C
ATOM    278  O   GLU A  38      17.034  14.839  11.695  1.00 43.56           O
ATOM    279  CB  GLU A  38      18.958  14.366  14.184  1.00 48.88           C
ATOM    280  CG  GLU A  38      19.650  13.390  15.099  1.00 56.44           C
ATOM    281  CD  GLU A  38      19.438  13.743  16.569  1.00 62.40           C
ATOM    282  OE1 GLU A  38      18.400  13.335  17.134  1.00 66.81           O
ATOM    283  OE2 GLU A  38      20.295  14.438  17.162  1.00 62.97           O
ATOM    284  N   LEU A  39      18.760  16.267  11.638  1.00 42.52           N
ATOM    285  CA  LEU A  39      18.012  17.310  10.947  1.00 38.39           C
ATOM    286  C   LEU A  39      18.873  18.016   9.917  1.00 37.75           C
ATOM    287  O   LEU A  39      19.836  18.711  10.260  1.00 37.24           O
ATOM    288  CB  LEU A  39      17.470  18.338  11.949  1.00 36.50           C
ATOM    289  CG  LEU A  39      16.698  19.540  11.385  1.00 35.31           C
ATOM    290  CD1 LEU A  39      15.411  19.082  10.735  1.00 32.83           C
ATOM    291  CD2 LEU A  39      16.401  20.537  12.491  1.00 32.93           C
ATOM    292  N   ASN A  40      18.523  17.823   8.651  1.00 38.34           N
ATOM    293  CA  ASN A  40      19.239  18.453   7.557  1.00 36.52           C
ATOM    294  C   ASN A  40      18.724  19.885   7.395  1.00 33.47           C
ATOM    295  O   ASN A  40      17.626  20.105   6.882  1.00 29.28           O
ATOM    296  CB  ASN A  40      19.042  17.665   6.261  1.00 37.46           C
ATOM    297  CG  ASN A  40      19.859  18.229   5.106  1.00 41.58           C
ATOM    298  OD1 ASN A  40      20.772  19.040   5.302  1.00 41.28           O
ATOM    299  ND2 ASN A  40      19.528  17.808   3.895  1.00 42.51           N
ATOM    300  N   LEU A  41      19.541  20.848   7.821  1.00 30.23           N
ATOM    301  CA  LEU A  41      19.186  22.257   7.746  1.00 29.10           C
ATOM    302  C   LEU A  41      19.000  22.805   6.338  1.00 29.52           C
ATOM    303  O   LEU A  41      18.344  23.824   6.163  1.00 27.99           O
ATOM    304  CB  LEU A  41      20.191  23.107   8.519  1.00 26.30           C
ATOM    305  CG  LEU A  41      20.205  22.855  10.027  1.00 27.35           C
ATOM    306  CD1 LEU A  41      21.100  23.862  10.720  1.00 26.87           C
ATOM    307  CD2 LEU A  41      18.797  22.961  10.578  1.00 27.66           C
ATOM    308  N   LEU A  42      19.563  22.137   5.333  1.00 32.20           N
ATOM    309  CA  LEU A  42      19.410  22.590   3.946  1.00 34.55           C
ATOM    310  C   LEU A  42      18.058  22.175   3.361  1.00 35.50           C
ATOM    311  O   LEU A  42      17.641  22.674   2.315  1.00 37.16           O
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ATOM    312  CB  LEU A  42      20.532  22.041   3.067  1.00 32.08           C
ATOM    313  CG  LEU A  42      21.949  22.451   3.459  1.00 39.02           C
ATOM    314  CD1 LEU A  42      22.926  21.931   2.418  1.00 41.28           C
ATOM    315  CD2 LEU A  42      22.047  23.965   3.554  1.00 39.26           C
ATOM    316  N   ASP A  43      17.387  21.254   4.045  1.00 36.52           N
ATOM    317  CA  ASP A  43      16.089  20.740   3.620  1.00 37.75           C
ATOM    318  C   ASP A  43      14.942  21.569   4.218  1.00 36.46           C
ATOM    319  O   ASP A  43      14.664  21.480   5.417  1.00 34.50           O
ATOM    320  CB  ASP A  43      15.975  19.273   4.061  1.00 39.78           C
ATOM    321  CG  ASP A  43      14.819  18.526   3.398  1.00 41.33           C
ATOM    322  OD1 ASP A  43      13.970  19.132   2.706  1.00 43.53           O
ATOM    323  OD2 ASP A  43      14.770  17.295   3.580  1.00 45.01           O
ATOM    324  N   SER A  44      14.266  22.342   3.366  1.00 36.33           N
ATOM    325  CA  SER A  44      13.138  23.188   3.782  1.00 38.00           C
ATOM    326  C   SER A  44      12.052  22.392   4.499  1.00 35.58           C
ATOM    327  O   SER A  44      11.659  22.749   5.606  1.00 36.68           O
ATOM    328  CB  SER A  44      12.501  23.884   2.572  1.00 38.92           C
ATOM    329  OG  SER A  44      13.479  24.470   1.734  1.00 48.46           O
ATOM    330  N   ARG A  45      11.567  21.329   3.850  1.00 33.51           N
ATOM    331  CA  ARG A  45      10.511  20.473   4.399  1.00 34.32           C
ATOM    332  C   ARG A  45      10.909  19.882   5.746  1.00 33.06           C
ATOM    333  O   ARG A  45      10.122  19.910   6.690  1.00 35.03           O
ATOM    334  CB  ARG A  45      10.138  19.355   3.399  1.00 33.08           C
ATOM    335  N   ALA A  46      12.142  19.394   5.848  1.00 31.22           N
ATOM    336  CA  ALA A  46      12.626  18.825   7.101  1.00 30.44           C
ATOM    337  C   ALA A  46      12.599  19.861   8.229  1.00 31.44           C
ATOM    338  O   ALA A  46      12.125  19.571   9.334  1.00 32.23           O
ATOM    339  CB  ALA A  46      14.025  18.281   6.924  1.00 31.62           C
ATOM    340  N   VAL A  47      13.081  21.072   7.936  1.00 29.54           N
ATOM    341  CA  VAL A  47      13.115  22.154   8.917  1.00 27.16           C
ATOM    342  C   VAL A  47      11.701  22.577   9.320  1.00 28.86           C
ATOM    343  O   VAL A  47      11.433  22.785  10.502  1.00 28.12           O
ATOM    344  CB  VAL A  47      13.917  23.379   8.396  1.00 24.67           C
ATOM    345  CG1 VAL A  47      14.000  24.469   9.458  1.00 23.42           C
ATOM    346  CG2 VAL A  47      15.307  22.951   7.999  1.00 19.37           C
ATOM    347  N   HIS A  48      10.792  22.694   8.351  1.00 31.64           N
ATOM    348  CA  HIS A  48       9.414  23.082   8.663  1.00 35.83           C
ATOM    349  C   HIS A  48       8.733  21.998   9.495  1.00 35.96           C
ATOM    350  O   HIS A  48       8.064  22.297  10.482  1.00 35.43           O
ATOM    351  CB  HIS A  48       8.618  23.408   7.391  1.00 38.28           C
ATOM    352  CG  HIS A  48       8.926  24.764   6.818  1.00 50.27           C
ATOM    353  ND1 HIS A  48      10.096  25.046   6.140  1.00 53.21           N
ATOM    354  CD2 HIS A  48       8.224  25.924   6.845  1.00 51.29           C
ATOM    355  CE1 HIS A  48      10.103  26.317   5.777  1.00 51.07           C
ATOM    356  NE2 HIS A  48       8.978  26.872   6.193  1.00 50.00           N
ATOM    357  N   ASP A  49       8.975  20.737   9.140  1.00 38.30           N
ATOM    358  CA  ASP A  49       8.407  19.614   9.874  1.00 38.86           C
ATOM    359  C   ASP A  49       8.851  19.639  11.323  1.00 38.89           C
ATOM    360  O   ASP A  49       8.056  19.373  12.224  1.00 40.59           O
ATOM    361  CB  ASP A  49       8.828  18.292   9.247  1.00 42.49           C
ATOM    362  CG  ASP A  49       7.981  17.918   8.047  1.00 50.21           C
ATOM    363  OD1 ASP A  49       7.082  18.710   7.669  1.00 50.35           O
ATOM    364  OD2 ASP A  49       8.217  16.822   7.481  1.00 53.08           O
ATOM    365  N   PHE A  50      10.127  19.954  11.531  1.00 35.97           N
ATOM    366  CA  PHE A  50      10.709  20.030  12.865  1.00 34.02           C
ATOM    367  C   PHE A  50      10.049  21.118  13.714  1.00 35.18           C
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ATOM    368  O   PHE A  50       9.714  20.893  14.877  1.00 38.29           O
ATOM    369  CB  PHE A  50      12.219  20.283  12.761  1.00 30.83           C
ATOM    370  CG  PHE A  50      12.851  20.722  14.047  1.00 30.52           C
ATOM    371  CD1 PHE A  50      13.162  19.799  15.038  1.00 31.61           C
ATOM    372  CD2 PHE A  50      13.117  22.068  14.281  1.00 32.48           C
ATOM    373  CE1 PHE A  50      13.732  20.212  16.253  1.00 32.15           C
ATOM    374  CE2 PHE A  50      13.684  22.490  15.490  1.00 32.18           C
ATOM    375  CZ  PHE A  50      13.992  21.560  16.476  1.00 31.47           C
ATOM    376  N   PHE A  51       9.888  22.305  13.142  1.00 37.07           N
ATOM    377  CA  PHE A  51       9.274  23.417  13.858  1.00 36.16           C
ATOM    378  C   PHE A  51       7.784  23.170  14.128  1.00 38.74           C
ATOM    379  O   PHE A  51       7.220  23.693  15.101  1.00 38.01           O
ATOM    380  CB  PHE A  51       9.492  24.725  13.090  1.00 32.36           C
ATOM    381  CG  PHE A  51      10.795  25.409  13.412  1.00 29.69           C
ATOM    382  CD1 PHE A  51      10.927  26.177  14.561  1.00 29.87           C
ATOM    383  CD2 PHE A  51      11.893  25.288  12.565  1.00 31.86           C
ATOM    384  CE1 PHE A  51      12.138  26.820  14.866  1.00 32.30           C
ATOM    385  CE2 PHE A  51      13.112  25.932  12.864  1.00 32.42           C
ATOM    386  CZ  PHE A  51      13.230  26.697  14.014  1.00 25.70           C
ATOM    387  N   ALA A  52       7.158  22.371  13.266  1.00 39.97           N
ATOM    388  CA  ALA A  52       5.745  22.028  13.411  1.00 41.53           C
ATOM    389  C   ALA A  52       5.563  21.008  14.539  1.00 44.62           C
ATOM    390  O   ALA A  52       4.649  21.141  15.351  1.00 45.89           O
ATOM    391  CB  ALA A  52       5.202  21.466  12.103  1.00 38.20           C
ATOM    392  N   SER A  53       6.459  20.019  14.601  1.00 46.42           N
ATOM    393  CA  SER A  53       6.418  18.960  15.616  1.00 45.72           C
ATOM    394  C   SER A  53       6.849  19.405  17.004  1.00 47.16           C
ATOM    395  O   SER A  53       6.238  19.004  17.987  1.00 49.71           O
ATOM    396  CB  SER A  53       7.288  17.782  15.192  1.00 45.45           C
ATOM    397  OG  SER A  53       6.980  17.394  13.868  1.00 53.05           O
ATOM    398  N   GLU A  54       7.932  20.178  17.091  1.00 46.86           N
ATOM    399  CA  GLU A  54       8.437  20.662  18.376  1.00 46.84           C
ATOM    400  C   GLU A  54       7.795  21.977  18.768  1.00 47.50           C
ATOM    401  O   GLU A  54       7.248  22.684  17.925  1.00 51.96           O
ATOM    402  CB  GLU A  54       9.949  20.849  18.324  1.00 48.68           C
ATOM    403  CG  GLU A  54      10.724  19.587  18.019  1.00 53.13           C
ATOM    404  CD  GLU A  54      10.444  18.468  19.007  1.00 60.46           C
ATOM    405  OE1 GLU A  54      10.399  18.721  20.234  1.00 57.16           O
ATOM    406  OE2 GLU A  54      10.262  17.322  18.546  1.00 66.12           O
ATOM    407  N   ARG A  55       7.863  22.313  20.048  1.00 46.85           N
ATOM    408  CA  ARG A  55       7.280  23.567  20.505  1.00 49.02           C
ATOM    409  C   ARG A  55       8.405  24.508  20.939  1.00 48.90           C
ATOM    410  O   ARG A  55       8.730  24.604  22.123  1.00 53.40           O
ATOM    411  CB  ARG A  55       6.292  23.314  21.649  1.00 50.58           C
ATOM    412  N   ILE A  56       8.984  25.209  19.966  1.00 44.99           N
ATOM    413  CA  ILE A  56      10.100  26.126  20.202  1.00 38.13           C
ATOM    414  C   ILE A  56       9.670  27.529  20.621  1.00 34.31           C
ATOM    415  O   ILE A  56       8.745  28.101  20.055  1.00 36.35           O
ATOM    416  CB  ILE A  56      10.991  26.232  18.931  1.00 35.61           C
ATOM    417  CG1 ILE A  56      11.369  24.834  18.426  1.00 35.46           C
ATOM    418  CG2 ILE A  56      12.240  27.036  19.221  1.00 33.34           C
ATOM    419  CD1 ILE A  56      12.076  23.987  19.448  1.00 33.67           C
ATOM    420  N   ASP A  57      10.357  28.082  21.611  1.00 32.47           N
ATOM    421  CA  ASP A  57      10.068  29.431  22.092  1.00 32.79           C
ATOM    422  C   ASP A  57      11.131  30.411  21.605  1.00 33.07           C
ATOM    423  O   ASP A  57      10.832  31.569  21.330  1.00 31.43           O
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ATOM    424  CB  ASP A  57      10.009  29.462  23.624  1.00 36.91           C
ATOM    425  CG  ASP A  57       8.894  28.592  24.183  1.00 39.26           C
ATOM    426  OD1 ASP A  57       7.712  28.887  23.906  1.00 47.27           O
ATOM    427  OD2 ASP A  57       9.193  27.606  24.884  1.00 40.90           O
ATOM    428  N   GLN A  58      12.375  29.940  21.512  1.00 31.78           N
ATOM    429  CA  GLN A  58      13.500  30.765  21.071  1.00 28.04           C
ATOM    430  C   GLN A  58      14.429  29.995  20.148  1.00 27.13           C
ATOM    431  O   GLN A  58      14.527  28.770  20.238  1.00 25.86           O
ATOM    432  CB  GLN A  58      14.312  31.237  22.269  1.00 29.78           C
ATOM    433  CG  GLN A  58      13.572  32.123  23.240  1.00 31.73           C
ATOM    434  CD  GLN A  58      14.419  32.464  24.440  1.00 35.81           C
ATOM    435  OE1 GLN A  58      15.628  32.228  24.449  1.00 40.84           O
ATOM    436  NE2 GLN A  58      13.795  33.023  25.462  1.00 37.26           N
ATOM    437  N   VAL A  59      15.091  30.716  19.245  1.00 24.01           N
ATOM    438  CA  VAL A  59      16.036  30.099  18.320  1.00 21.93           C
ATOM    439  C   VAL A  59      17.366  30.859  18.272  1.00 23.38           C
ATOM    440  O   VAL A  59      17.396  32.089  18.135  1.00 21.63           O
ATOM    441  CB  VAL A  59      15.490  30.016  16.875  1.00 17.31           C
ATOM    442  CG1 VAL A  59      16.567  29.490  15.939  1.00 16.78           C
ATOM    443  CG2 VAL A  59      14.284  29.102  16.804  1.00 18.50           C
ATOM    444  N   TYR A  60      18.457  30.125  18.483  1.00 23.89           N
ATOM    445  CA  TYR A  60      19.805  30.684  18.383  1.00 20.82           C
ATOM    446  C   TYR A  60      20.325  30.105  17.069  1.00 19.95           C
ATOM    447  O   TYR A  60      20.594  28.908  16.969  1.00 17.96           O
ATOM    448  CB  TYR A  60      20.686  30.249  19.555  1.00 21.24           C
ATOM    449  CG  TYR A  60      20.468  31.047  20.821  1.00 21.26           C
ATOM    450  CD1 TYR A  60      19.495  30.666  21.750  1.00 26.71           C
ATOM    451  CD2 TYR A  60      21.243  32.172  21.106  1.00 22.27           C
ATOM    452  CE1 TYR A  60      19.290  31.396  22.946  1.00 25.66           C
ATOM    453  CE2 TYR A  60      21.051  32.907  22.295  1.00 24.50           C
ATOM    454  CZ  TYR A  60      20.070  32.507  23.207  1.00 25.26           C
ATOM    455  OH  TYR A  60      19.858  33.223  24.363  1.00 25.38           O
ATOM    456  N   LEU A  61      20.353  30.937  16.034  1.00 20.46           N
ATOM    457  CA  LEU A  61      20.801  30.500  14.720  1.00 22.94           C
ATOM    458  C   LEU A  61      22.323  30.605  14.639  1.00 21.21           C
ATOM    459  O   LEU A  61      22.879  31.611  14.191  1.00 19.44           O
ATOM    460  CB  LEU A  61      20.068  31.311  13.629  1.00 22.58           C
ATOM    461  CG  LEU A  61      20.352  31.155  12.126  1.00 27.44           C
ATOM    462  CD1 LEU A  61      20.798  29.760  11.759  1.00 29.14           C
ATOM    463  CD2 LEU A  61      19.129  31.557  11.324  1.00 23.03           C
ATOM    464  N   ALA A  62      22.981  29.558  15.131  1.00 20.78           N
ATOM    465  CA  ALA A  62      24.439  29.491  15.158  1.00 22.32           C
ATOM    466  C   ALA A  62      25.008  28.541  14.112  1.00 22.99           C
ATOM    467  O   ALA A  62      26.208  28.335  14.054  1.00 28.02           O
ATOM    468  CB  ALA A  62      24.924  29.095  16.549  1.00 16.86           C
ATOM    469  N   ALA A  63      24.149  27.942  13.299  1.00 24.22           N
ATOM    470  CA  ALA A  63      24.618  27.030  12.268  1.00 26.70           C
ATOM    471  C   ALA A  63      25.088  27.849  11.077  1.00 29.99           C
ATOM    472  O   ALA A  63      24.420  28.809  10.672  1.00 32.35           O
ATOM    473  CB  ALA A  63      23.509  26.082  11.845  1.00 20.68           C
ATOM    474  N   ALA A  64      26.229  27.453  10.513  1.00 28.73           N
ATOM    475  CA  ALA A  64      26.815  28.136   9.365  1.00 28.35           C
ATOM    476  C   ALA A  64      27.903  27.287   8.724  1.00 28.85           C
ATOM    477  O   ALA A  64      28.439  26.374   9.345  1.00 31.39           O
ATOM    478  CB  ALA A  64      27.412  29.491   9.798  1.00 21.63           C
ATOM    479  N   LYS A  65      28.197  27.578   7.464  1.00 28.86           N
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ATOM    480  CA  LYS A  65      29.265  26.911   6.736  1.00 28.57           C
ATOM    481  C   LYS A  65      30.399  27.936   6.874  1.00 29.46           C
ATOM    482  O   LYS A  65      30.346  29.013   6.283  1.00 29.87           O
ATOM    483  CB  LYS A  65      28.852  26.722   5.276  1.00 30.04           C
ATOM    484  CG  LYS A  65      29.972  26.397   4.306  1.00 32.70           C
ATOM    485  CD  LYS A  65      30.449  24.989   4.456  1.00 35.74           C
ATOM    486  CE  LYS A  65      31.365  24.620   3.313  1.00 37.17           C
ATOM    487  NZ  LYS A  65      31.739  23.186   3.409  1.00 42.92           N
ATOM    488  N   VAL A  66      31.349  27.642   7.765  1.00 31.78           N
ATOM    489  CA  VAL A  66      32.496  28.518   8.044  1.00 28.32           C
ATOM    490  C   VAL A  66      33.836  27.881   7.639  1.00 29.15           C
ATOM    491  O   VAL A  66      33.949  26.662   7.495  1.00 28.25           O
ATOM    492  CB  VAL A  66      32.568  28.857   9.543  1.00 27.61           C
ATOM    493  CG1 VAL A  66      31.324  29.604   9.979  1.00 25.46           C
ATOM    494  CG2 VAL A  66      32.700  27.579  10.343  1.00 29.97           C
ATOM    495  N   GLY A  67      34.858  28.710   7.471  1.00 27.21           N
ATOM    496  CA  GLY A  67      36.155  28.192   7.087  1.00 27.65           C
ATOM    497  C   GLY A  67      37.206  29.276   6.971  1.00 29.05           C
ATOM    498  O   GLY A  67      36.928  30.461   7.202  1.00 29.48           O
ATOM    499  N   GLY A  68      38.422  28.866   6.620  1.00 27.78           N
ATOM    500  CA  GLY A  68      39.504  29.813   6.474  1.00 24.32           C
ATOM    501  C   GLY A  68      39.628  30.369   5.071  1.00 24.11           C
ATOM    502  O   GLY A  68      38.774  30.154   4.207  1.00 24.87           O
ATOM    503  N   ILE A  69      40.726  31.085   4.868  1.00 25.85           N
ATOM    504  CA  ILE A  69      41.087  31.733   3.616  1.00 26.01           C
ATOM    505  C   ILE A  69      41.059  30.786   2.420  1.00 24.51           C
ATOM    506  O   ILE A  69      40.480  31.108   1.385  1.00 23.62           O
ATOM    507  CB  ILE A  69      42.468  32.406   3.787  1.00 30.92           C
ATOM    508  CG1 ILE A  69      42.295  33.666   4.630  1.00 34.71           C
ATOM    509  CG2 ILE A  69      43.102  32.744   2.461  1.00 33.29           C
ATOM    510  CD1 ILE A  69      43.594  34.282   5.076  1.00 44.69           C
ATOM    511  N   VAL A  70      41.655  29.608   2.578  1.00 24.85           N
ATOM    512  CA  VAL A  70      41.682  28.619   1.506  1.00 24.94           C
ATOM    513  C   VAL A  70      40.268  28.116   1.188  1.00 25.06           C
ATOM    514  O   VAL A  70      39.845  28.152   0.031  1.00 24.93           O
ATOM    515  CB  VAL A  70      42.652  27.417   1.820  1.00 23.27           C
ATOM    516  CG1 VAL A  70      42.550  26.337   0.738  1.00 19.99           C
ATOM    517  CG2 VAL A  70      44.098  27.912   1.888  1.00 19.31           C
ATOM    518  N   ALA A  71      39.518  27.724   2.215  1.00 21.50           N
ATOM    519  CA  ALA A  71      38.165  27.215   2.006  1.00 22.13           C
ATOM    520  C   ALA A  71      37.230  28.219   1.326  1.00 21.39           C
ATOM    521  O   ALA A  71      36.528  27.864   0.380  1.00 23.27           O
ATOM    522  CB  ALA A  71      37.567  26.726   3.326  1.00 20.98           C
ATOM    523  N   ASN A  72      37.239  29.469   1.783  1.00 21.80           N
ATOM    524  CA  ASN A  72      36.378  30.498   1.197  1.00 23.46           C
ATOM    525  C   ASN A  72      36.667  30.811  -0.265  1.00 24.70           C
ATOM    526  O   ASN A  72      35.762  31.210  -0.997  1.00 26.93           O
ATOM    527  CB  ASN A  72      36.429  31.791   2.008  1.00 25.35           C
ATOM    528  CG  ASN A  72      35.501  31.763   3.205  1.00 27.71           C
ATOM    529  OD1 ASN A  72      35.916  31.422   4.317  1.00 27.32           O
ATOM    530  ND2 ASN A  72      34.235  32.109   2.983  1.00 22.83           N
ATOM    531  N   ASN A  73      37.928  30.673  -0.676  1.00 21.45           N
ATOM    532  CA  ASN A  73      38.313  30.927  -2.063  1.00 21.72           C
ATOM    533  C   ASN A  73      38.203  29.673  -2.917  1.00 21.77           C
ATOM    534  O   ASN A  73      38.120  29.760  -4.136  1.00 24.02           O
ATOM    535  CB  ASN A  73      39.751  31.447  -2.150  1.00 21.46           C
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ATOM    536  CG  ASN A  73      39.864  32.930  -1.870  1.00 23.22           C
ATOM    537  OD1 ASN A  73      39.263  33.759  -2.562  1.00 25.88           O
ATOM    538  ND2 ASN A  73      40.660  33.278  -0.866  1.00 23.69           N
ATOM    539  N   THR A  74      38.240  28.509  -2.278  1.00 21.03           N
ATOM    540  CA  THR A  74      38.162  27.246  -2.989  1.00 20.74           C
ATOM    541  C   THR A  74      36.729  26.762  -3.210  1.00 22.90           C
ATOM    542  O   THR A  74      36.409  26.230  -4.274  1.00 19.55           O
ATOM    543  CB  THR A  74      38.999  26.171  -2.276  1.00 23.57           C
ATOM    544  OG1 THR A  74      40.346  26.646  -2.162  1.00 21.16           O
ATOM    545  CG2 THR A  74      38.998  24.854  -3.069  1.00 21.26           C
ATOM    546  N   TYR A  75      35.855  26.980  -2.229  1.00 20.96           N
ATOM    547  CA  TYR A  75      34.462  26.556  -2.367  1.00 21.11           C
ATOM    548  C   TYR A  75      33.503  27.735  -2.217  1.00 20.71           C
ATOM    549  O   TYR A  75      32.592  27.678  -1.408  1.00 21.27           O
ATOM    550  CB  TYR A  75      34.120  25.517  -1.301  1.00 21.71           C
ATOM    551  CG  TYR A  75      35.156  24.437  -1.125  1.00 26.72           C
ATOM    552  CD1 TYR A  75      35.182  23.324  -1.968  1.00 27.65           C
ATOM    553  CD2 TYR A  75      36.120  24.531  -0.118  1.00 28.34           C
ATOM    554  CE1 TYR A  75      36.145  22.325  -1.815  1.00 32.86           C
ATOM    555  CE2 TYR A  75      37.089  23.544   0.044  1.00 30.84           C
ATOM    556  CZ  TYR A  75      37.096  22.444  -0.807  1.00 35.47           C
ATOM    557  OH  TYR A  75      38.057  21.471  -0.660  1.00 39.98           O
ATOM    558  N   PRO A  76      33.670  28.802  -3.017  1.00 18.90           N
ATOM    559  CA  PRO A  76      32.760  29.946  -2.879  1.00 18.51           C
ATOM    560  C   PRO A  76      31.257  29.639  -3.018  1.00 20.26           C
ATOM    561  O   PRO A  76      30.451  30.142  -2.229  1.00 22.12           O
ATOM    562  CB  PRO A  76      33.277  30.928  -3.939  1.00 18.14           C
ATOM    563  CG  PRO A  76      33.924  30.034  -4.961  1.00 19.03           C
ATOM    564  CD  PRO A  76      34.645  29.032  -4.097  1.00 16.40           C
ATOM    565  N   ALA A  77      30.881  28.805  -3.988  1.00 20.99           N
ATOM    566  CA  ALA A  77      29.478  28.437  -4.189  1.00 19.31           C
ATOM    567  C   ALA A  77      28.864  27.748  -2.965  1.00 21.24           C
ATOM    568  O   ALA A  77      27.740  28.049  -2.578  1.00 21.45           O
ATOM    569  CB  ALA A  77      29.343  27.556  -5.392  1.00 17.40           C
ATOM    570  N   ASP A  78      29.603  26.826  -2.351  1.00 23.42           N
ATOM    571  CA  ASP A  78      29.111  26.111  -1.173  1.00 22.41           C
ATOM    572  C   ASP A  78      28.892  27.063  -0.008  1.00 22.34           C
ATOM    573  O   ASP A  78      27.932  26.920   0.742  1.00 23.86           O
ATOM    574  CB  ASP A  78      30.093  25.015  -0.733  1.00 24.46           C
ATOM    575  CG  ASP A  78      30.320  23.941  -1.799  1.00 26.39           C
ATOM    576  OD1 ASP A  78      29.645  23.918  -2.855  1.00 27.59           O
ATOM    577  OD2 ASP A  78      31.207  23.105  -1.572  1.00 32.24           O
ATOM    578  N   PHE A  79      29.779  28.044   0.135  1.00 22.66           N
ATOM    579  CA  PHE A  79      29.680  29.010   1.223  1.00 24.09           C
ATOM    580  C   PHE A  79      28.503  29.960   1.112  1.00 23.02           C
ATOM    581  O   PHE A  79      27.847  30.241   2.116  1.00 24.00           O
ATOM    582  CB  PHE A  79      30.974  29.797   1.382  1.00 24.78           C
ATOM    583  CG  PHE A  79      32.022  29.073   2.173  1.00 27.62           C
ATOM    584  CD1 PHE A  79      32.842  28.127   1.572  1.00 25.69           C
ATOM    585  CD2 PHE A  79      32.197  29.344   3.525  1.00 28.71           C
ATOM    586  CE1 PHE A  79      33.820  27.462   2.306  1.00 28.22           C
ATOM    587  CE2 PHE A  79      33.177  28.682   4.267  1.00 28.29           C
ATOM    588  CZ  PHE A  79      33.989  27.741   3.656  1.00 25.69           C
ATOM    589  N   ILE A  80      28.234  30.466  -0.090  1.00 18.41           N
ATOM    590  CA  ILE A  80      27.101  31.369  -0.254  1.00 18.98           C
ATOM    591  C   ILE A  80      25.776  30.603  -0.258  1.00 17.84           C
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ATOM    592  O   ILE A  80      24.859  30.941   0.485  1.00 18.53           O
ATOM    593  CB  ILE A  80      27.229  32.319  -1.507  1.00 17.70           C
ATOM    594  CG1 ILE A  80      26.044  33.287  -1.533  1.00 15.75           C
ATOM    595  CG2 ILE A  80      27.313  31.535  -2.821  1.00 10.37           C
ATOM    596  CD1 ILE A  80      26.218  34.461  -2.473  1.00 17.66           C
ATOM    597  N   TYR A  81      25.710  29.519  -1.027  1.00 19.40           N
ATOM    598  CA  TYR A  81      24.495  28.721  -1.111  1.00 19.48           C
ATOM    599  C   TYR A  81      24.047  28.094   0.215  1.00 20.05           C
ATOM    600  O   TYR A  81      22.895  28.239   0.626  1.00 21.48           O
ATOM    601  CB  TYR A  81      24.646  27.631  -2.169  1.00 19.25           C
ATOM    602  CG  TYR A  81      23.469  26.677  -2.190  1.00 26.38           C
ATOM    603  CD1 TYR A  81      22.286  27.015  -2.862  1.00 25.34           C
ATOM    604  CD2 TYR A  81      23.511  25.458  -1.492  1.00 21.53           C
ATOM    605  CE1 TYR A  81      21.176  26.168  -2.833  1.00 24.00           C
ATOM    606  CE2 TYR A  81      22.408  24.610  -1.461  1.00 22.64           C
ATOM    607  CZ  TYR A  81      21.247  24.974  -2.131  1.00 24.22           C
ATOM    608  OH  TYR A  81      20.142  24.158  -2.092  1.00 27.95           O
ATOM    609  N   GLN A  82      24.946  27.391   0.885  1.00 18.83           N
ATOM    610  CA  GLN A  82      24.579  26.743   2.128  1.00 19.55           C
ATOM    611  C   GLN A  82      24.179  27.695   3.227  1.00 20.61           C
ATOM    612  O   GLN A  82      23.269  27.404   3.988  1.00 23.95           O
ATOM    613  CB  GLN A  82      25.690  25.814   2.602  1.00 21.91           C
ATOM    614  CG  GLN A  82      25.762  24.540   1.808  1.00 23.95           C
ATOM    615  CD  GLN A  82      26.957  23.700   2.173  1.00 25.68           C
ATOM    616  OE1 GLN A  82      27.532  23.030   1.322  1.00 32.27           O
ATOM    617  NE2 GLN A  82      27.352  23.740   3.437  1.00 26.29           N
ATOM    618  N   ASN A  83      24.884  28.811   3.346  1.00 20.43           N
ATOM    619  CA  ASN A  83      24.547  29.779   4.371  1.00 20.70           C
ATOM    620  C   ASN A  83      23.214  30.446   4.050  1.00 21.75           C
ATOM    621  O   ASN A  83      22.404  30.673   4.952  1.00 23.26           O
ATOM    622  CB  ASN A  83      25.669  30.794   4.570  1.00 20.97           C
ATOM    623  CG  ASN A  83      26.840  30.213   5.371  1.00 27.66           C
ATOM    624  OD1 ASN A  83      26.693  29.881   6.545  1.00 26.41           O
ATOM    625  ND2 ASN A  83      27.993  30.056   4.724  1.00 28.22           N
ATOM    626  N   MET A  84      22.952  30.695   2.764  1.00 21.60           N
ATOM    627  CA  MET A  84      21.680  31.302   2.381  1.00 21.97           C
ATOM    628  C   MET A  84      20.519  30.363   2.686  1.00 21.10           C
ATOM    629  O   MET A  84      19.509  30.798   3.226  1.00 20.39           O
ATOM    630  CB  MET A  84      21.668  31.695   0.903  1.00 21.32           C
ATOM    631  CG  MET A  84      22.221  33.090   0.587  1.00 20.30           C
ATOM    632  SD  MET A  84      22.294  33.350  -1.233  1.00 24.15           S
ATOM    633  CE  MET A  84      20.557  33.462  -1.657  1.00 20.11           C
ATOM    634  N   MET A  85      20.672  29.084   2.352  1.00 21.09           N
ATOM    635  CA  MET A  85      19.619  28.092   2.611  1.00 23.41           C
ATOM    636  C   MET A  85      19.361  27.888   4.095  1.00 22.84           C
ATOM    637  O   MET A  85      18.209  27.891   4.504  1.00 23.52           O
ATOM    638  CB  MET A  85      19.912  26.739   1.965  1.00 23.63           C
ATOM    639  CG  MET A  85      19.721  26.720   0.468  1.00 32.64           C
ATOM    640  SD  MET A  85      18.081  27.235  -0.095  1.00 39.52           S
ATOM    641  CE  MET A  85      17.091  25.881   0.515  1.00 30.12           C
ATOM    642  N   ILE A  86      20.416  27.719   4.896  1.00 21.87           N
ATOM    643  CA  ILE A  86      20.274  27.526   6.353  1.00 21.86           C
ATOM    644  C   ILE A  86      19.532  28.719   6.991  1.00 22.93           C
ATOM    645  O   ILE A  86      18.597  28.529   7.774  1.00 21.91           O
ATOM    646  CB  ILE A  86      21.660  27.343   7.052  1.00 22.20           C
ATOM    647  CG1 ILE A  86      22.331  26.054   6.582  1.00 20.74           C
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ATOM    648  CG2 ILE A  86      21.502  27.271   8.569  1.00 18.63           C
ATOM    649  CD1 ILE A  86      23.777  25.922   7.063  1.00 22.13           C
ATOM    650  N   GLU A  87      19.943  29.938   6.636  1.00 21.80           N
ATOM    651  CA  GLU A  87      19.302  31.154   7.151  1.00 23.48           C
ATOM    652  C   GLU A  87      17.817  31.231   6.794  1.00 23.01           C
ATOM    653  O   GLU A  87      16.977  31.385   7.675  1.00 24.77           O
ATOM    654  CB  GLU A  87      19.992  32.391   6.589  1.00 21.15           C
ATOM    655  CG  GLU A  87      21.259  32.750   7.297  1.00 23.77           C
ATOM    656  CD  GLU A  87      22.202  33.542   6.422  1.00 23.44           C
ATOM    657  OE1 GLU A  87      21.745  34.167   5.438  1.00 20.50           O
ATOM    658  OE2 GLU A  87      23.417  33.504   6.706  1.00 28.19           O
ATOM    659  N   SER A  88      17.521  31.107   5.496  1.00 25.79           N
ATOM    660  CA  SER A  88      16.164  31.160   4.938  1.00 24.76           C
ATOM    661  C   SER A  88      15.226  30.110   5.499  1.00 25.71           C
ATOM    662  O   SER A  88      14.080  30.413   5.829  1.00 25.35           O
ATOM    663  CB  SER A  88      16.212  30.988   3.420  1.00 25.59           C
ATOM    664  OG  SER A  88      16.910  32.058   2.829  1.00 29.95           O
ATOM    665  N   ASN A  89      15.705  28.870   5.571  1.00 24.49           N
ATOM    666  CA  ASN A  89      14.916  27.753   6.088  1.00 25.30           C
ATOM    667  C   ASN A  89      14.487  27.962   7.534  1.00 25.06           C
ATOM    668  O   ASN A  89      13.303  27.928   7.840  1.00 25.30           O
ATOM    669  CB  ASN A  89      15.693  26.438   5.961  1.00 22.06           C
ATOM    670  CG  ASN A  89      15.752  25.930   4.534  1.00 24.21           C
ATOM    671  OD1 ASN A  89      16.524  25.025   4.219  1.00 27.34           O
ATOM    672  ND2 ASN A  89      14.924  26.500   3.664  1.00 23.31           N
ATOM    673  N   ILE A  90      15.460  28.203   8.407  1.00 26.23           N
ATOM    674  CA  ILE A  90      15.201  28.419   9.826  1.00 26.62           C
ATOM    675  C   ILE A  90      14.351  29.656  10.103  1.00 24.72           C
ATOM    676  O   ILE A  90      13.337  29.570  10.790  1.00 26.06           O
ATOM    677  CB  ILE A  90      16.528  28.476  10.635  1.00 24.11           C
ATOM    678  CG1 ILE A  90      17.212  27.104  10.572  1.00 25.62           C
ATOM    679  CG2 ILE A  90      16.264  28.891  12.078  1.00 21.05           C
ATOM    680  CD1 ILE A  90      18.523  27.005  11.318  1.00 24.81           C
ATOM    681  N   ILE A  91      14.749  30.799   9.556  1.00 24.73           N
ATOM    682  CA  ILE A  91      14.004  32.039   9.777  1.00 23.15           C
ATOM    683  C   ILE A  91      12.553  31.977   9.291  1.00 23.62           C
ATOM    684  O   ILE A  91      11.645  32.424   9.988  1.00 23.03           O
ATOM    685  CB  ILE A  91      14.751  33.254   9.183  1.00 19.75           C
ATOM    686  CG1 ILE A  91      16.033  33.498   9.976  1.00 16.64           C
ATOM    687  CG2 ILE A  91      13.882  34.495   9.222  1.00 19.98           C
ATOM    688  CD1 ILE A  91      16.906  34.608   9.421  1.00 17.13           C
ATOM    689  N   HIS A  92      12.329  31.392   8.119  1.00 23.77           N
ATOM    690  CA  HIS A  92      10.975  31.278   7.585  1.00 23.91           C
ATOM    691  C   HIS A  92      10.151  30.235   8.344  1.00 25.62           C
ATOM    692  O   HIS A  92       8.987  30.476   8.655  1.00 26.83           O
ATOM    693  CB  HIS A  92      10.995  30.927   6.102  1.00 22.99           C
ATOM    694  CG  HIS A  92       9.662  31.070   5.436  1.00 27.47           C
ATOM    695  ND1 HIS A  92       9.011  30.015   4.832  1.00 26.88           N
ATOM    696  CD2 HIS A  92       8.856  32.148   5.282  1.00 25.84           C
ATOM    697  CE1 HIS A  92       7.864  30.438   4.331  1.00 26.81           C
ATOM    698  NE2 HIS A  92       7.746  31.728   4.591  1.00 30.26           N
ATOM    699  N   ALA A  93      10.741  29.071   8.616  1.00 24.22           N
ATOM    700  CA  ALA A  93      10.046  28.016   9.358  1.00 23.43           C
ATOM    701  C   ALA A  93       9.685  28.508  10.748  1.00 25.27           C
ATOM    702  O   ALA A  93       8.629  28.167  11.274  1.00 29.50           O
ATOM    703  CB  ALA A  93      10.906  26.787   9.470  1.00 18.41           C
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ATOM    704  N   ALA A  94      10.572  29.301  11.347  1.00 24.57           N
ATOM    705  CA  ALA A  94      10.333  29.841  12.678  1.00 24.51           C
ATOM    706  C   ALA A  94       9.090  30.714  12.655  1.00 26.61           C
ATOM    707  O   ALA A  94       8.182  30.526  13.458  1.00 31.53           O
ATOM    708  CB  ALA A  94      11.545  30.644  13.166  1.00 18.87           C
ATOM    709  N   HIS A  95       9.020  31.623  11.689  1.00 27.32           N
ATOM    710  CA  HIS A  95       7.880  32.517  11.578  1.00 25.48           C
ATOM    711  C   HIS A  95       6.591  31.760  11.300  1.00 24.07           C
ATOM    712  O   HIS A  95       5.562  32.064  11.895  1.00 24.98           O
ATOM    713  CB  HIS A  95       8.093  33.554  10.485  1.00 20.05           C
ATOM    714  CG  HIS A  95       6.853  34.327  10.165  1.00 25.10           C
ATOM    715  ND1 HIS A  95       6.100  34.093   9.032  1.00 27.73           N
ATOM    716  CD2 HIS A  95       6.191  35.278  10.865  1.00 19.55           C
ATOM    717  CE1 HIS A  95       5.028  34.864   9.051  1.00 23.37           C
ATOM    718  NE2 HIS A  95       5.060  35.592  10.153  1.00 23.51           N
ATOM    719  N   GLN A  96       6.652  30.808  10.374  1.00 23.71           N
ATOM    720  CA  GLN A  96       5.497  29.987  10.008  1.00 28.30           C
ATOM    721  C   GLN A  96       4.920  29.240  11.199  1.00 29.03           C
ATOM    722  O   GLN A  96       3.750  28.880  11.196  1.00 33.97           O
ATOM    723  CB  GLN A  96       5.893  28.943   8.969  1.00 30.65           C
ATOM    724  CG  GLN A  96       6.278  29.474   7.633  1.00 41.03           C
ATOM    725  CD  GLN A  96       5.088  29.798   6.765  1.00 47.85           C
ATOM    726  OE1 GLN A  96       4.523  30.898   6.847  1.00 52.60           O
ATOM    727  NE2 GLN A  96       4.710  28.851   5.902  1.00 46.62           N
ATOM    728  N   ASN A  97       5.756  28.964  12.202  1.00 27.87           N
ATOM    729  CA  ASN A  97       5.330  28.219  13.388  1.00 27.23           C
ATOM    730  C   ASN A  97       5.291  29.030  14.676  1.00 27.97           C
ATOM    731  O   ASN A  97       5.416  28.499  15.783  1.00 31.31           O
ATOM    732  CB  ASN A  97       6.188  26.961  13.541  1.00 24.97           C
ATOM    733  CG  ASN A  97       5.945  25.966  12.422  1.00 31.23           C
ATOM    734  OD1 ASN A  97       6.678  25.939  11.430  1.00 35.80           O
ATOM    735  ND2 ASN A  97       4.884  25.181  12.547  1.00 30.89           N
ATOM    736  N   ASP A  98       5.093  30.330  14.516  1.00 30.60           N
ATOM    737  CA  ASP A  98       4.997  31.251  15.636  1.00 34.56           C
ATOM    738  C   ASP A  98       6.119  31.410  16.631  1.00 34.83           C
ATOM    739  O   ASP A  98       5.858  31.768  17.773  1.00 37.00           O
ATOM    740  CB  ASP A  98       3.670  31.073  16.372  1.00 42.60           C
ATOM    741  CG  ASP A  98       2.507  31.683  15.617  1.00 49.29           C
ATOM    742  OD1 ASP A  98       2.562  32.910  15.341  1.00 55.67           O
ATOM    743  OD2 ASP A  98       1.562  30.936  15.286  1.00 57.67           O
ATOM    744  N   VAL A  99       7.356  31.151  16.204  1.00 33.38           N
ATOM    745  CA  VAL A  99       8.492  31.368  17.087  1.00 28.21           C
ATOM    746  C   VAL A  99       8.752  32.871  16.919  1.00 27.85           C
ATOM    747  O   VAL A  99       9.090  33.342  15.824  1.00 28.51           O
ATOM    748  CB  VAL A  99       9.736  30.576  16.672  1.00 29.62           C
ATOM    749  CG1 VAL A  99      10.838  30.774  17.699  1.00 26.80           C
ATOM    750  CG2 VAL A  99       9.400  29.110  16.499  1.00 30.83           C
ATOM    751  N   ASN A 100       8.537  33.630  17.985  1.00 24.40           N
ATOM    752  CA  ASN A 100       8.707  35.073  17.924  1.00 25.38           C
ATOM    753  C   ASN A 100      10.125  35.577  18.208  1.00 26.01           C
ATOM    754  O   ASN A 100      10.494  36.678  17.781  1.00 26.31           O
ATOM    755  CB  ASN A 100       7.713  35.749  18.869  1.00 22.78           C
ATOM    756  CG  ASN A 100       7.384  37.150  18.441  1.00 23.65           C
ATOM    757  OD1 ASN A 100       6.840  37.361  17.357  1.00 26.63           O
ATOM    758  ND2 ASN A 100       7.748  38.124  19.260  1.00 22.16           N
ATOM    759  N   LYS A 101      10.907  34.775  18.930  1.00 24.59           N
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ATOM    760  CA  LYS A 101      12.272  35.157  19.291  1.00 27.58           C
ATOM    761  C   LYS A 101      13.348  34.367  18.567  1.00 25.12           C
ATOM    762  O   LYS A 101      13.324  33.141  18.523  1.00 24.26           O
ATOM    763  CB  LYS A 101      12.488  35.018  20.798  1.00 25.44           C
ATOM    764  CG  LYS A 101      12.020  36.194  21.616  1.00 24.49           C
ATOM    765  CD  LYS A 101      12.599  36.066  23.008  1.00 26.85           C
ATOM    766  CE  LYS A 101      12.971  37.409  23.586  1.00 28.02           C
ATOM    767  NZ  LYS A 101      13.940  38.154  22.745  1.00 28.99           N
ATOM    768  N   LEU A 102      14.331  35.084  18.044  1.00 24.26           N
ATOM    769  CA  LEU A 102      15.423  34.442  17.332  1.00 22.79           C
ATOM    770  C   LEU A 102      16.649  35.334  17.378  1.00 22.92           C
ATOM    771  O   LEU A 102      16.525  36.562  17.420  1.00 20.27           O
ATOM    772  CB  LEU A 102      15.009  34.137  15.884  1.00 21.89           C
ATOM    773  CG  LEU A 102      15.956  33.443  14.894  1.00 23.80           C
ATOM    774  CD1 LEU A 102      15.156  32.613  13.903  1.00 20.74           C
ATOM    775  CD2 LEU A 102      16.818  34.457  14.169  1.00 19.60           C
ATOM    776  N   LEU A 103      17.818  34.707  17.513  1.00 20.09           N
ATOM    777  CA  LEU A 103      19.075  35.438  17.518  1.00 19.90           C
ATOM    778  C   LEU A 103      19.950  34.876  16.403  1.00 20.69           C
ATOM    779  O   LEU A 103      20.236  33.679  16.361  1.00 19.79           O
ATOM    780  CB  LEU A 103      19.813  35.311  18.848  1.00 22.09           C
ATOM    781  CG  LEU A 103      21.070  36.184  18.836  1.00 19.35           C
ATOM    782  CD1 LEU A 103      20.684  37.626  19.161  1.00 17.91           C
ATOM    783  CD2 LEU A 103      22.074  35.667  19.833  1.00 20.28           C
ATOM    784  N   PHE A 104      20.327  35.746  15.474  1.00 19.27           N
ATOM    785  CA  PHE A 104      21.164  35.369  14.347  1.00 21.13           C
ATOM    786  C   PHE A 104      22.614  35.782  14.628  1.00 22.17           C
ATOM    787  O   PHE A 104      22.881  36.938  14.966  1.00 22.36           O
ATOM    788  CB  PHE A 104      20.635  36.045  13.071  1.00 19.61           C
ATOM    789  CG  PHE A 104      21.501  35.838  11.864  1.00 21.08           C
ATOM    790  CD1 PHE A 104      21.678  34.569  11.327  1.00 22.45           C
ATOM    791  CD2 PHE A 104      22.152  36.920  11.268  1.00 22.15           C
ATOM    792  CE1 PHE A 104      22.492  34.376  10.211  1.00 21.84           C
ATOM    793  CE2 PHE A 104      22.965  36.739  10.153  1.00 19.34           C
ATOM    794  CZ  PHE A 104      23.135  35.465   9.626  1.00 20.01           C
ATOM    795  N   LEU A 105      23.529  34.815  14.560  1.00 24.95           N
ATOM    796  CA  LEU A 105      24.947  35.077  14.785  1.00 24.08           C
ATOM    797  C   LEU A 105      25.615  35.288  13.454  1.00 23.94           C
ATOM    798  O   LEU A 105      25.662  34.387  12.618  1.00 24.97           O
ATOM    799  CB  LEU A 105      25.617  33.931  15.532  1.00 25.82           C
ATOM    800  CG  LEU A 105      25.259  33.904  17.013  1.00 32.42           C
ATOM    801  CD1 LEU A 105      24.000  33.077  17.222  1.00 34.59           C
ATOM    802  CD2 LEU A 105      26.408  33.320  17.810  1.00 39.53           C
ATOM    803  N   GLY A 106      26.081  36.507  13.238  1.00 24.52           N
ATOM    804  CA  GLY A 106      26.729  36.823  11.987  1.00 28.38           C
ATOM    805  C   GLY A 106      28.231  36.642  12.051  1.00 31.04           C
ATOM    806  O   GLY A 106      28.729  35.674  12.629  1.00 31.93           O
ATOM    807  N   SER A 107      28.945  37.614  11.491  1.00 33.31           N
ATOM    808  CA  SER A 107      30.398  37.610  11.437  1.00 34.34           C
ATOM    809  C   SER A 107      30.922  39.026  11.234  1.00 34.11           C
ATOM    810  O   SER A 107      30.187  39.946  10.894  1.00 36.15           O
ATOM    811  CB  SER A 107      30.875  36.715  10.288  1.00 33.89           C
ATOM    812  OG  SER A 107      32.282  36.747  10.171  1.00 42.44           O
ATOM    813  N   SER A 108      32.221  39.174  11.417  1.00 39.10           N
ATOM    814  CA  SER A 108      32.900  40.445  11.272  1.00 39.74           C
ATOM    815  C   SER A 108      33.242  40.737   9.800  1.00 40.29           C
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ATOM    816  O   SER A 108      33.494  41.886   9.424  1.00 39.37           O
ATOM    817  CB  SER A 108      34.183  40.379  12.096  1.00 41.29           C
ATOM    818  OG  SER A 108      34.636  41.671  12.405  1.00 48.91           O
ATOM    819  N   CYS A 109      33.247  39.684   8.981  1.00 39.93           N
ATOM    820  CA  CYS A 109      33.572  39.755   7.554  1.00 37.55           C
ATOM    821  C   CYS A 109      32.605  40.592   6.748  1.00 35.15           C
ATOM    822  O   CYS A 109      32.905  40.967   5.620  1.00 40.63           O
ATOM    823  CB  CYS A 109      33.563  38.352   6.955  1.00 42.94           C
ATOM    824  SG  CYS A 109      34.457  37.166   7.928  1.00 53.93           S
ATOM    825  N   ILE A 110      31.425  40.832   7.299  1.00 31.38           N
ATOM    826  CA  ILE A 110      30.395  41.604   6.612  1.00 29.42           C
ATOM    827  C   ILE A 110      30.752  43.076   6.393  1.00 25.36           C
ATOM    828  O   ILE A 110      30.086  43.764   5.628  1.00 26.86           O
ATOM    829  CB  ILE A 110      29.041  41.565   7.386  1.00 33.31           C
ATOM    830  CG1 ILE A 110      29.162  42.364   8.697  1.00 38.51           C
ATOM    831  CG2 ILE A 110      28.627  40.127   7.672  1.00 29.58           C
ATOM    832  CD1 ILE A 110      27.837  42.813   9.315  1.00 38.77           C
ATOM    833  N   TYR A 111      31.760  43.582   7.090  1.00 21.85           N
ATOM    834  CA  TYR A 111      32.109  44.986   6.939  1.00 20.03           C
ATOM    835  C   TYR A 111      32.999  45.277   5.750  1.00 22.43           C
ATOM    836  O   TYR A 111      33.749  44.411   5.305  1.00 20.86           O
ATOM    837  CB  TYR A 111      32.715  45.527   8.228  1.00 15.08           C
ATOM    838  CG  TYR A 111      31.673  45.688   9.290  1.00 17.60           C
ATOM    839  CD1 TYR A 111      30.623  46.607   9.134  1.00 20.30           C
ATOM    840  CD2 TYR A 111      31.700  44.907  10.433  1.00 18.94           C
ATOM    841  CE1 TYR A 111      29.623  46.739  10.102  1.00 16.41           C
ATOM    842  CE2 TYR A 111      30.709  45.029  11.414  1.00 22.50           C
ATOM    843  CZ  TYR A 111      29.677  45.945  11.245  1.00 20.99           C
ATOM    844  OH  TYR A 111      28.740  46.078  12.246  1.00 22.59           O
ATOM    845  N   PRO A 112      32.895  46.497   5.193  1.00 23.64           N
ATOM    846  CA  PRO A 112      33.703  46.906   4.041  1.00 23.42           C
ATOM    847  C   PRO A 112      35.180  46.693   4.356  1.00 25.37           C
ATOM    848  O   PRO A 112      35.591  46.816   5.505  1.00 24.92           O
ATOM    849  CB  PRO A 112      33.382  48.387   3.918  1.00 21.66           C
ATOM    850  CG  PRO A 112      31.972  48.467   4.414  1.00 27.17           C
ATOM    851  CD  PRO A 112      32.004  47.589   5.622  1.00 25.03           C
ATOM    852  N   LYS A 113      35.960  46.330   3.344  1.00 28.77           N
ATOM    853  CA  LYS A 113      37.392  46.098   3.512  1.00 33.94           C
ATOM    854  C   LYS A 113      38.099  47.351   4.071  1.00 35.82           C
ATOM    855  O   LYS A 113      38.917  47.267   4.999  1.00 35.60           O
ATOM    856  CB  LYS A 113      38.000  45.701   2.164  1.00 36.30           C
ATOM    857  CG  LYS A 113      39.470  45.376   2.227  1.00 45.37           C
ATOM    858  CD  LYS A 113      40.091  45.338   0.839  1.00 54.03           C
ATOM    859  CE  LYS A 113      41.606  45.132   0.946  1.00 56.48           C
ATOM    860  NZ  LYS A 113      42.287  45.217  -0.378  1.00 59.58           N
ATOM    861  N   LEU A 114      37.733  48.511   3.529  1.00 37.76           N
ATOM    862  CA  LEU A 114      38.315  49.788   3.935  1.00 39.22           C
ATOM    863  C   LEU A 114      37.414  50.622   4.842  1.00 37.04           C
ATOM    864  O   LEU A 114      37.354  51.839   4.714  1.00 41.23           O
ATOM    865  CB  LEU A 114      38.696  50.597   2.693  1.00 39.94           C
ATOM    866  CG  LEU A 114      39.706  49.884   1.792  1.00 45.05           C
ATOM    867  CD1 LEU A 114      39.901  50.688   0.528  1.00 45.75           C
ATOM    868  CD2 LEU A 114      41.034  49.663   2.524  1.00 40.39           C
ATOM    869  N   ALA A 115      36.741  49.970   5.779  1.00 35.28           N
ATOM    870  CA  ALA A 115      35.857  50.659   6.704  1.00 33.09           C
ATOM    871  C   ALA A 115      36.613  51.598   7.662  1.00 35.11           C
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ATOM    872  O   ALA A 115      37.822  51.473   7.855  1.00 34.89           O
ATOM    873  CB  ALA A 115      35.052  49.638   7.492  1.00 31.08           C
ATOM    874  N   LYS A 116      35.888  52.560   8.226  1.00 36.33           N
ATOM    875  CA  LYS A 116      36.429  53.523   9.179  1.00 35.52           C
ATOM    876  C   LYS A 116      36.601  52.744  10.480  1.00 32.90           C
ATOM    877  O   LYS A 116      35.722  51.961  10.838  1.00 32.39           O
ATOM    878  CB  LYS A 116      35.417  54.661   9.372  1.00 42.56           C
ATOM    879  CG  LYS A 116      35.831  55.754  10.353  1.00 54.48           C
ATOM    880  CD  LYS A 116      34.605  56.562  10.799  1.00 64.13           C
ATOM    881  CE  LYS A 116      34.956  57.655  11.814  1.00 69.67           C
ATOM    882  NZ  LYS A 116      35.652  58.833  11.194  1.00 73.03           N
ATOM    883  N   GLN A 117      37.721  52.952  11.175  1.00 29.00           N
ATOM    884  CA  GLN A 117      38.012  52.242  12.428  1.00 26.52           C
ATOM    885  C   GLN A 117      37.918  53.135  13.671  1.00 27.16           C
ATOM    886  O   GLN A 117      38.391  54.265  13.662  1.00 32.28           O
ATOM    887  CB  GLN A 117      39.419  51.630  12.371  1.00 24.33           C
ATOM    888  CG  GLN A 117      39.689  50.728  11.180  1.00 19.77           C
ATOM    889  CD  GLN A 117      38.842  49.479  11.197  1.00 22.38           C
ATOM    890  OE1 GLN A 117      38.534  48.929  12.262  1.00 23.93           O
ATOM    891  NE2 GLN A 117      38.455  49.018  10.013  1.00 21.03           N
ATOM    892  N   PRO A 118      37.284  52.648  14.750  1.00 26.44           N
ATOM    893  CA  PRO A 118      36.656  51.325  14.875  1.00 28.65           C
ATOM    894  C   PRO A 118      35.358  51.288  14.066  1.00 26.51           C
ATOM    895  O   PRO A 118      34.771  52.334  13.786  1.00 24.82           O
ATOM    896  CB  PRO A 118      36.418  51.196  16.384  1.00 26.96           C
ATOM    897  CG  PRO A 118      36.227  52.620  16.815  1.00 26.14           C
ATOM    898  CD  PRO A 118      37.309  53.336  16.050  1.00 25.13           C
ATOM    899  N   MET A 119      34.942  50.091  13.665  1.00 26.63           N
ATOM    900  CA  MET A 119      33.749  49.919  12.844  1.00 23.21           C
ATOM    901  C   MET A 119      32.423  49.884  13.585  1.00 24.45           C
ATOM    902  O   MET A 119      32.122  48.931  14.310  1.00 24.24           O
ATOM    903  CB  MET A 119      33.889  48.668  11.988  1.00 21.81           C
ATOM    904  CG  MET A 119      35.163  48.642  11.187  1.00 22.20           C
ATOM    905  SD  MET A 119      35.268  47.217  10.106  1.00 27.33           S
ATOM    906  CE  MET A 119      35.589  45.888  11.303  1.00 19.94           C
ATOM    907  N   ALA A 120      31.627  50.932  13.395  1.00 22.55           N
ATOM    908  CA  ALA A 120      30.315  51.003  14.015  1.00 23.74           C
ATOM    909  C   ALA A 120      29.368  50.216  13.107  1.00 23.58           C
ATOM    910  O   ALA A 120      29.697  49.932  11.950  1.00 20.35           O
ATOM    911  CB  ALA A 120      29.864  52.453  14.141  1.00 21.01           C
ATOM    912  N   GLU A 121      28.209  49.848  13.648  1.00 22.80           N
ATOM    913  CA  GLU A 121      27.207  49.081  12.920  1.00 19.02           C
ATOM    914  C   GLU A 121      26.786  49.706  11.599  1.00 20.31           C
ATOM    915  O   GLU A 121      26.491  48.998  10.619  1.00 22.22           O
ATOM    916  CB  GLU A 121      25.987  48.857  13.806  1.00 17.19           C
ATOM    917  CG  GLU A 121      26.207  47.824  14.907  1.00 20.42           C
ATOM    918  CD  GLU A 121      26.826  48.376  16.195  1.00 22.19           C
ATOM    919  OE1 GLU A 121      27.281  49.541  16.236  1.00 22.90           O
ATOM    920  OE2 GLU A 121      26.849  47.627  17.192  1.00 24.76           O
ATOM    921  N   SER A 122      26.811  51.034  11.565  1.00 19.68           N
ATOM    922  CA  SER A 122      26.427  51.815  10.387  1.00 22.94           C
ATOM    923  C   SER A 122      27.431  51.737   9.242  1.00 24.18           C
ATOM    924  O   SER A 122      27.248  52.354   8.192  1.00 28.79           O
ATOM    925  CB  SER A 122      26.230  53.278  10.784  1.00 24.75           C
ATOM    926  OG  SER A 122      27.409  53.785  11.388  1.00 27.14           O
ATOM    927  N   GLU A 123      28.489  50.970   9.445  1.00 24.97           N
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ATOM    928  CA  GLU A 123      29.514  50.802   8.439  1.00 22.55           C
ATOM    929  C   GLU A 123      29.078  49.708   7.452  1.00 24.69           C
ATOM    930  O   GLU A 123      29.671  49.529   6.378  1.00 20.59           O
ATOM    931  CB  GLU A 123      30.807  50.423   9.141  1.00 27.06           C
ATOM    932  CG  GLU A 123      32.038  50.922   8.458  1.00 35.87           C
ATOM    933  CD  GLU A 123      32.101  52.431   8.375  1.00 33.11           C
ATOM    934  OE1 GLU A 123      31.851  53.098   9.395  1.00 35.45           O
ATOM    935  OE2 GLU A 123      32.423  52.945   7.285  1.00 38.10           O
ATOM    936  N   LEU A 124      28.013  48.998   7.817  1.00 24.39           N
ATOM    937  CA  LEU A 124      27.478  47.932   6.990  1.00 25.61           C
ATOM    938  C   LEU A 124      27.066  48.450   5.621  1.00 26.76           C
ATOM    939  O   LEU A 124      26.404  49.477   5.526  1.00 26.07           O
ATOM    940  CB  LEU A 124      26.267  47.298   7.663  1.00 26.76           C
ATOM    941  CG  LEU A 124      25.764  46.056   6.934  1.00 27.57           C
ATOM    942  CD1 LEU A 124      26.816  44.977   7.062  1.00 30.81           C
ATOM    943  CD2 LEU A 124      24.459  45.584   7.515  1.00 30.71           C
ATOM    944  N   LEU A 125      27.484  47.742   4.571  1.00 26.51           N
ATOM    945  CA  LEU A 125      27.160  48.086   3.189  1.00 28.73           C
ATOM    946  C   LEU A 125      27.717  49.424   2.680  1.00 31.00           C
ATOM    947  O   LEU A 125      27.284  49.919   1.638  1.00 33.72           O
ATOM    948  CB  LEU A 125      25.634  48.017   2.968  1.00 23.17           C
ATOM    949  CG  LEU A 125      24.978  46.630   2.979  1.00 23.91           C
ATOM    950  CD1 LEU A 125      23.471  46.742   3.054  1.00 26.25           C
ATOM    951  CD2 LEU A 125      25.362  45.864   1.733  1.00 25.69           C
ATOM    952  N   GLN A 126      28.719  49.967   3.369  1.00 33.38           N
ATOM    953  CA  GLN A 126      29.328  51.251   2.994  1.00 33.38           C
ATOM    954  C   GLN A 126      30.495  51.190   2.011  1.00 35.24           C
ATOM    955  O   GLN A 126      31.095  52.215   1.690  1.00 42.89           O
ATOM    956  CB  GLN A 126      29.816  51.973   4.244  1.00 35.51           C
ATOM    957  CG  GLN A 126      28.728  52.369   5.185  1.00 41.05           C
ATOM    958  CD  GLN A 126      27.961  53.556   4.687  1.00 46.67           C
ATOM    959  OE1 GLN A 126      27.751  53.718   3.482  1.00 47.42           O
ATOM    960  NE2 GLN A 126      27.548  54.415   5.610  1.00 51.29           N
ATOM    961  N   GLY A 127      30.842  50.003   1.544  1.00 31.57           N
ATOM    962  CA  GLY A 127      31.955  49.902   0.632  1.00 27.05           C
ATOM    963  C   GLY A 127      32.162  48.465   0.237  1.00 28.42           C
ATOM    964  O   GLY A 127      31.510  47.561   0.757  1.00 29.17           O
ATOM    965  N   THR A 128      33.115  48.246  -0.653  1.00 30.18           N
ATOM    966  CA  THR A 128      33.368  46.907  -1.145  1.00 32.00           C
ATOM    967  C   THR A 128      33.940  45.949  -0.102  1.00 30.18           C
ATOM    968  O   THR A 128      34.695  46.342   0.796  1.00 30.42           O
ATOM    969  CB  THR A 128      34.230  46.923  -2.456  1.00 33.85           C
ATOM    970  OG1 THR A 128      35.589  47.227  -2.143  1.00 39.54           O
ATOM    971  CG2 THR A 128      33.702  47.974  -3.437  1.00 32.70           C
ATOM    972  N   LEU A 129      33.528  44.692  -0.230  1.00 26.65           N
ATOM    973  CA  LEU A 129      33.945  43.617   0.650  1.00 26.74           C
ATOM    974  C   LEU A 129      35.306  43.021   0.272  1.00 25.84           C
ATOM    975  O   LEU A 129      35.778  43.179  -0.856  1.00 25.80           O
ATOM    976  CB  LEU A 129      32.887  42.506   0.620  1.00 24.20           C
ATOM    977  CG  LEU A 129      31.479  42.903   1.067  1.00 27.12           C
ATOM    978  CD1 LEU A 129      30.448  41.853   0.667  1.00 25.07           C
ATOM    979  CD2 LEU A 129      31.487  43.123   2.568  1.00 23.65           C
ATOM    980  N   GLU A 130      35.924  42.357   1.249  1.00 25.34           N
ATOM    981  CA  GLU A 130      37.186  41.654   1.082  1.00 25.63           C
ATOM    982  C   GLU A 130      36.841  40.497   0.125  1.00 23.70           C
ATOM    983  O   GLU A 130      35.941  39.699   0.398  1.00 22.32           O
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ATOM    984  CB  GLU A 130      37.647  41.146   2.462  1.00 31.61           C
ATOM    985  CG  GLU A 130      38.807  40.145   2.473  1.00 44.51           C
ATOM    986  CD  GLU A 130      40.024  40.615   1.681  1.00 50.88           C
ATOM    987  OE1 GLU A 130      40.546  41.718   1.997  1.00 51.87           O
ATOM    988  OE2 GLU A 130      40.446  39.873   0.747  1.00 47.74           O
ATOM    989  N   PRO A 131      37.514  40.429  -1.038  1.00 24.95           N
ATOM    990  CA  PRO A 131      37.256  39.375  -2.029  1.00 23.16           C
ATOM    991  C   PRO A 131      37.182  37.957  -1.467  1.00 23.75           C
ATOM    992  O   PRO A 131      36.271  37.196  -1.804  1.00 23.62           O
ATOM    993  CB  PRO A 131      38.421  39.538  -3.006  1.00 24.87           C
ATOM    994  CG  PRO A 131      38.670  41.015  -2.977  1.00 24.99           C
ATOM    995  CD  PRO A 131      38.608  41.312  -1.487  1.00 25.33           C
ATOM    996  N   THR A 132      38.133  37.613  -0.602  1.00 22.79           N
ATOM    997  CA  THR A 132      38.183  36.290   0.003  1.00 24.22           C
ATOM    998  C   THR A 132      36.881  35.902   0.682  1.00 25.53           C
ATOM    999  O   THR A 132      36.403  34.780   0.514  1.00 27.30           O
ATOM   1000  CB  THR A 132      39.315  36.188   1.032  1.00 25.39           C
ATOM   1001  OG1 THR A 132      40.574  36.289   0.357  1.00 32.02           O
ATOM   1002  CG2 THR A 132      39.247  34.852   1.788  1.00 25.21           C
ATOM   1003  N   ASN A 133      36.283  36.859   1.387  1.00 25.39           N
ATOM   1004  CA  ASN A 133      35.052  36.621   2.130  1.00 25.48           C
ATOM   1005  C   ASN A 133      33.760  37.046   1.466  1.00 22.73           C
ATOM   1006  O   ASN A 133      32.689  36.844   2.033  1.00 21.09           O
ATOM   1007  CB  ASN A 133      35.153  37.302   3.490  1.00 29.44           C
ATOM   1008  CG  ASN A 133      36.339  36.815   4.280  1.00 37.28           C
ATOM   1009  OD1 ASN A 133      36.501  35.603   4.496  1.00 39.13           O
ATOM   1010  ND2 ASN A 133      37.209  37.743   4.677  1.00 36.26           N
ATOM   1011  N   GLU A 134      33.844  37.580   0.255  1.00 20.34           N
ATOM   1012  CA  GLU A 134      32.658  38.058  -0.417  1.00 19.34           C
ATOM   1013  C   GLU A 134      31.421  37.144  -0.432  1.00 22.68           C
ATOM   1014  O   GLU A 134      30.357  37.566   0.005  1.00 24.36           O
ATOM   1015  CB  GLU A 134      32.993  38.574  -1.810  1.00 20.84           C
ATOM   1016  CG  GLU A 134      31.778  39.149  -2.490  1.00 23.80           C
ATOM   1017  CD  GLU A 134      32.107  39.915  -3.733  1.00 23.82           C
ATOM   1018  OE1 GLU A 134      32.521  41.085  -3.604  1.00 25.93           O
ATOM   1019  OE2 GLU A 134      31.938  39.354  -4.835  1.00 23.35           O
ATOM   1020  N   PRO A 135      31.535  35.884  -0.907  1.00 23.47           N
ATOM   1021  CA  PRO A 135      30.343  35.017  -0.920  1.00 22.85           C
ATOM   1022  C   PRO A 135      29.732  34.786   0.471  1.00 21.96           C
ATOM   1023  O   PRO A 135      28.518  34.901   0.664  1.00 23.69           O
ATOM   1024  CB  PRO A 135      30.873  33.712  -1.530  1.00 20.98           C
ATOM   1025  CG  PRO A 135      31.946  34.195  -2.444  1.00 21.71           C
ATOM   1026  CD  PRO A 135      32.662  35.229  -1.596  1.00 22.19           C
ATOM   1027  N   TYR A 136      30.577  34.464   1.437  1.00 19.36           N
ATOM   1028  CA  TYR A 136      30.122  34.231   2.803  1.00 21.14           C
ATOM   1029  C   TYR A 136      29.485  35.502   3.391  1.00 21.26           C
ATOM   1030  O   TYR A 136      28.419  35.441   4.007  1.00 22.03           O
ATOM   1031  CB  TYR A 136      31.308  33.769   3.657  1.00 21.13           C
ATOM   1032  CG  TYR A 136      31.065  33.687   5.146  1.00 23.59           C
ATOM   1033  CD1 TYR A 136      30.300  32.654   5.697  1.00 25.30           C
ATOM   1034  CD2 TYR A 136      31.644  34.614   6.013  1.00 24.68           C
ATOM   1035  CE1 TYR A 136      30.123  32.545   7.074  1.00 24.34           C
ATOM   1036  CE2 TYR A 136      31.470  34.512   7.387  1.00 27.94           C
ATOM   1037  CZ  TYR A 136      30.710  33.475   7.909  1.00 27.12           C
ATOM   1038  OH  TYR A 136      30.534  33.376   9.271  1.00 36.62           O
ATOM   1039  N   ALA A 137      30.134  36.644   3.175  1.00 17.67           N
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ATOM   1040  CA  ALA A 137      29.649  37.926   3.675  1.00 18.15           C
ATOM   1041  C   ALA A 137      28.276  38.292   3.115  1.00 17.90           C
ATOM   1042  O   ALA A 137      27.419  38.797   3.836  1.00 19.04           O
ATOM   1043  CB  ALA A 137      30.647  39.024   3.351  1.00 21.17           C
ATOM   1044  N   ILE A 138      28.065  38.045   1.832  1.00 16.53           N
ATOM   1045  CA  ILE A 138      26.783  38.365   1.219  1.00 18.71           C
ATOM   1046  C   ILE A 138      25.679  37.538   1.858  1.00 18.63           C
ATOM   1047  O   ILE A 138      24.589  38.045   2.111  1.00 16.14           O
ATOM   1048  CB  ILE A 138      26.815  38.129  -0.302  1.00 19.32           C
ATOM   1049  CG1 ILE A 138      27.774  39.127  -0.954  1.00 21.58           C
ATOM   1050  CG2 ILE A 138      25.415  38.233  -0.892  1.00 20.45           C
ATOM   1051  CD1 ILE A 138      27.332  40.566  -0.856  1.00 23.61           C
ATOM   1052  N   ALA A 139      25.975  36.271   2.130  1.00 17.91           N
ATOM   1053  CA  ALA A 139      25.003  35.380   2.758  1.00 18.66           C
ATOM   1054  C   ALA A 139      24.645  35.881   4.166  1.00 20.07           C
ATOM   1055  O   ALA A 139      23.468  35.906   4.541  1.00 20.04           O
ATOM   1056  CB  ALA A 139      25.551  33.945   2.820  1.00 16.98           C
ATOM   1057  N   LYS A 140      25.659  36.309   4.921  1.00 16.68           N
ATOM   1058  CA  LYS A 140      25.456  36.809   6.280  1.00 17.51           C
ATOM   1059  C   LYS A 140      24.615  38.089   6.304  1.00 19.38           C
ATOM   1060  O   LYS A 140      23.726  38.243   7.143  1.00 19.61           O
ATOM   1061  CB  LYS A 140      26.803  37.024   6.996  1.00 17.19           C
ATOM   1062  CG  LYS A 140      27.493  35.740   7.412  1.00 19.70           C
ATOM   1063  CD  LYS A 140      26.552  34.948   8.311  1.00 27.77           C
ATOM   1064  CE  LYS A 140      27.172  33.694   8.863  1.00 29.96           C
ATOM   1065  NZ  LYS A 140      26.335  33.184   9.977  1.00 30.18           N
ATOM   1066  N   ILE A 141      24.914  39.012   5.395  1.00 17.86           N
ATOM   1067  CA  ILE A 141      24.170  40.253   5.302  1.00 18.34           C
ATOM   1068  C   ILE A 141      22.712  39.926   4.960  1.00 19.01           C
ATOM   1069  O   ILE A 141      21.802  40.492   5.565  1.00 18.79           O
ATOM   1070  CB  ILE A 141      24.803  41.203   4.253  1.00 18.17           C
ATOM   1071  CG1 ILE A 141      26.121  41.753   4.790  1.00 15.45           C
ATOM   1072  CG2 ILE A 141      23.860  42.351   3.906  1.00 18.08           C
ATOM   1073  CD1 ILE A 141      26.979  42.400   3.725  1.00 15.85           C
ATOM   1074  N   ALA A 142      22.492  38.984   4.040  1.00 15.30           N
ATOM   1075  CA  ALA A 142      21.132  38.589   3.663  1.00 16.12           C
ATOM   1076  C   ALA A 142      20.401  38.037   4.886  1.00 17.04           C
ATOM   1077  O   ALA A 142      19.191  38.211   5.008  1.00 17.95           O
ATOM   1078  CB  ALA A 142      21.157  37.544   2.558  1.00 17.22           C
ATOM   1079  N   GLY A 143      21.143  37.369   5.779  1.00 17.48           N
ATOM   1080  CA  GLY A 143      20.575  36.822   7.007  1.00 13.52           C
ATOM   1081  C   GLY A 143      20.062  37.933   7.911  1.00 18.27           C
ATOM   1082  O   GLY A 143      18.969  37.834   8.468  1.00 17.07           O
ATOM   1083  N   ILE A 144      20.844  39.006   8.038  1.00 19.38           N
ATOM   1084  CA  ILE A 144      20.464  40.155   8.856  1.00 19.31           C
ATOM   1085  C   ILE A 144      19.228  40.834   8.268  1.00 18.59           C
ATOM   1086  O   ILE A 144      18.310  41.191   8.999  1.00 21.56           O
ATOM   1087  CB  ILE A 144      21.603  41.221   8.944  1.00 17.98           C
ATOM   1088  CG1 ILE A 144      22.803  40.673   9.720  1.00 13.98           C
ATOM   1089  CG2 ILE A 144      21.099  42.500   9.638  1.00 14.21           C
ATOM   1090  CD1 ILE A 144      24.023  41.565   9.603  1.00 13.94           C
ATOM   1091  N   LYS A 145      19.200  40.995   6.950  1.00 17.01           N
ATOM   1092  CA  LYS A 145      18.080  41.651   6.289  1.00 16.57           C
ATOM   1093  C   LYS A 145      16.794  40.829   6.317  1.00 16.80           C
ATOM   1094  O   LYS A 145      15.699  41.378   6.223  1.00 18.88           O
ATOM   1095  CB  LYS A 145      18.468  42.065   4.868  1.00 16.04           C
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ATOM   1096  CG  LYS A 145      19.620  43.051   4.839  1.00 14.82           C
ATOM   1097  CD  LYS A 145      19.300  44.276   5.665  1.00 16.49           C
ATOM   1098  CE  LYS A 145      20.464  45.240   5.783  1.00 14.44           C
ATOM   1099  NZ  LYS A 145      20.071  46.371   6.669  1.00 16.91           N
ATOM   1100  N   LEU A 146      16.925  39.512   6.411  1.00 17.72           N
ATOM   1101  CA  LEU A 146      15.762  38.637   6.515  1.00 18.09           C
ATOM   1102  C   LEU A 146      15.130  38.935   7.873  1.00 18.98           C
ATOM   1103  O   LEU A 146      13.930  39.152   7.973  1.00 20.75           O
ATOM   1104  CB  LEU A 146      16.179  37.170   6.463  1.00 16.75           C
ATOM   1105  CG  LEU A 146      16.263  36.496   5.099  1.00 18.85           C
ATOM   1106  CD1 LEU A 146      17.003  35.178   5.235  1.00 18.16           C
ATOM   1107  CD2 LEU A 146      14.871  36.267   4.552  1.00 17.81           C
ATOM   1108  N   CYS A 147      15.963  38.966   8.911  1.00 18.95           N
ATOM   1109  CA  CYS A 147      15.510  39.252  10.269  1.00 19.17           C
ATOM   1110  C   CYS A 147      14.762  40.578  10.336  1.00 17.87           C
ATOM   1111  O   CYS A 147      13.644  40.637  10.848  1.00 23.95           O
ATOM   1112  CB  CYS A 147      16.699  39.293  11.248  1.00 19.14           C
ATOM   1113  SG  CYS A 147      17.415  37.689  11.667  1.00 20.97           S
ATOM   1114  N   GLU A 148      15.384  41.635   9.816  1.00 17.99           N
ATOM   1115  CA  GLU A 148      14.794  42.979   9.816  1.00 18.37           C
ATOM   1116  C   GLU A 148      13.474  43.010   9.050  1.00 17.39           C
ATOM   1117  O   GLU A 148      12.510  43.602   9.507  1.00 21.13           O
ATOM   1118  CB  GLU A 148      15.788  44.017   9.250  1.00 14.57           C
ATOM   1119  CG  GLU A 148      17.070  44.148  10.092  1.00 13.52           C
ATOM   1120  CD  GLU A 148      18.106  45.127   9.551  1.00 14.62           C
ATOM   1121  OE1 GLU A 148      18.015  45.579   8.389  1.00 16.51           O
ATOM   1122  OE2 GLU A 148      19.031  45.456  10.319  1.00 20.79           O
ATOM   1123  N   SER A 149      13.422  42.299   7.929  1.00 19.34           N
ATOM   1124  CA  SER A 149      12.227  42.243   7.090  1.00 19.00           C
ATOM   1125  C   SER A 149      11.059  41.528   7.765  1.00 19.17           C
ATOM   1126  O   SER A 149       9.914  41.917   7.558  1.00 18.26           O
ATOM   1127  CB  SER A 149      12.551  41.604   5.734  1.00 17.15           C
ATOM   1128  OG  SER A 149      13.489  42.402   5.024  1.00 14.19           O
ATOM   1129  N   TYR A 150      11.345  40.481   8.549  1.00 19.29           N
ATOM   1130  CA  TYR A 150      10.304  39.746   9.274  1.00 17.60           C
ATOM   1131  C   TYR A 150       9.865  40.564  10.475  1.00 18.45           C
ATOM   1132  O   TYR A 150       8.710  40.489  10.876  1.00 20.88           O
ATOM   1133  CB  TYR A 150      10.767  38.347   9.708  1.00 15.76           C
ATOM   1134  CG  TYR A 150      10.648  37.310   8.606  1.00 17.89           C
ATOM   1135  CD1 TYR A 150      11.600  37.234   7.580  1.00 18.65           C
ATOM   1136  CD2 TYR A 150       9.545  36.460   8.537  1.00 20.61           C
ATOM   1137  CE1 TYR A 150      11.450  36.344   6.511  1.00 17.41           C
ATOM   1138  CE2 TYR A 150       9.388  35.556   7.465  1.00 19.44           C
ATOM   1139  CZ  TYR A 150      10.339  35.512   6.462  1.00 19.61           C
ATOM   1140  OH  TYR A 150      10.180  34.651   5.402  1.00 20.59           O
ATOM   1141  N   ASN A 151      10.786  41.341  11.042  1.00 16.10           N
ATOM   1142  CA  ASN A 151      10.461  42.208  12.170  1.00 19.90           C
ATOM   1143  C   ASN A 151       9.515  43.315  11.699  1.00 19.24           C
ATOM   1144  O   ASN A 151       8.536  43.627  12.364  1.00 21.47           O
ATOM   1145  CB  ASN A 151      11.710  42.865  12.753  1.00 16.62           C
ATOM   1146  CG  ASN A 151      12.620  41.889  13.469  1.00 18.87           C
ATOM   1147  OD1 ASN A 151      13.751  42.235  13.788  1.00 28.21           O
ATOM   1148  ND2 ASN A 151      12.150  40.681  13.716  1.00 14.64           N
ATOM   1149  N   ARG A 152       9.850  43.932  10.568  1.00 22.05           N
ATOM   1150  CA  ARG A 152       9.044  44.999   9.978  1.00 21.37           C
ATOM   1151  C   ARG A 152       7.664  44.514   9.510  1.00 21.48           C
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ATOM   1152  O   ARG A 152       6.641  45.029   9.957  1.00 22.70           O
ATOM   1153  CB  ARG A 152       9.802  45.651   8.814  1.00 18.06           C
ATOM   1154  CG  ARG A 152      10.973  46.514   9.264  1.00 16.68           C
ATOM   1155  CD  ARG A 152      11.790  47.030   8.091  1.00 16.80           C
ATOM   1156  NE  ARG A 152      11.055  48.004   7.295  1.00 20.16           N
ATOM   1157  CZ  ARG A 152      11.068  48.060   5.966  1.00 23.08           C
ATOM   1158  NH1 ARG A 152      11.778  47.189   5.257  1.00 25.34           N
ATOM   1159  NH2 ARG A 152      10.391  49.013   5.335  1.00 23.87           N
ATOM   1160  N   GLN A 153       7.638  43.485   8.666  1.00 20.73           N
ATOM   1161  CA  GLN A 153       6.383  42.960   8.138  1.00 20.79           C
ATOM   1162  C   GLN A 153       5.502  42.227   9.132  1.00 20.73           C
ATOM   1163  O   GLN A 153       4.328  42.525   9.233  1.00 21.63           O
ATOM   1164  CB  GLN A 153       6.620  42.039   6.931  1.00 16.56           C
ATOM   1165  CG  GLN A 153       5.316  41.569   6.258  1.00 16.97           C
ATOM   1166  CD  GLN A 153       5.518  40.772   4.962  1.00 16.59           C
ATOM   1167  OE1 GLN A 153       4.642  40.017   4.543  1.00 22.43           O
ATOM   1168  NE2 GLN A 153       6.653  40.948   4.327  1.00 10.42           N
ATOM   1169  N   TYR A 154       6.066  41.286   9.879  1.00 21.85           N
ATOM   1170  CA  TYR A 154       5.267  40.475  10.793  1.00 21.16           C
ATOM   1171  C   TYR A 154       5.318  40.813  12.271  1.00 20.36           C
ATOM   1172  O   TYR A 154       4.645  40.172  13.075  1.00 23.44           O
ATOM   1173  CB  TYR A 154       5.588  38.986  10.572  1.00 19.13           C
ATOM   1174  CG  TYR A 154       5.303  38.492   9.152  1.00 27.03           C
ATOM   1175  CD1 TYR A 154       3.983  38.330   8.693  1.00 24.58           C
ATOM   1176  CD2 TYR A 154       6.344  38.185   8.266  1.00 22.83           C
ATOM   1177  CE1 TYR A 154       3.710  37.880   7.398  1.00 23.56           C
ATOM   1178  CE2 TYR A 154       6.075  37.727   6.963  1.00 25.09           C
ATOM   1179  CZ  TYR A 154       4.755  37.583   6.538  1.00 27.11           C
ATOM   1180  OH  TYR A 154       4.475  37.170   5.248  1.00 29.14           O
ATOM   1181  N   GLY A 155       6.080  41.833  12.630  1.00 18.48           N
ATOM   1182  CA  GLY A 155       6.179  42.205  14.025  1.00 21.43           C
ATOM   1183  C   GLY A 155       6.946  41.180  14.831  1.00 22.37           C
ATOM   1184  O   GLY A 155       6.659  40.971  16.003  1.00 25.67           O
ATOM   1185  N   ARG A 156       7.909  40.518  14.198  1.00 23.34           N
ATOM   1186  CA  ARG A 156       8.737  39.527  14.884  1.00 21.88           C
ATOM   1187  C   ARG A 156       9.835  40.187  15.741  1.00 20.20           C
ATOM   1188  O   ARG A 156      10.028  41.406  15.707  1.00 18.48           O
ATOM   1189  CB  ARG A 156       9.367  38.579  13.870  1.00 18.88           C
ATOM   1190  CG  ARG A 156       8.384  37.648  13.212  1.00 18.28           C
ATOM   1191  CD  ARG A 156       7.802  36.741  14.247  1.00 20.89           C
ATOM   1192  NE  ARG A 156       6.837  35.804  13.689  1.00 22.13           N
ATOM   1193  CZ  ARG A 156       5.832  35.262  14.378  1.00 23.70           C
ATOM   1194  NH1 ARG A 156       5.643  35.574  15.653  1.00 24.16           N
ATOM   1195  NH2 ARG A 156       5.054  34.350  13.815  1.00 24.72           N
ATOM   1196  N   ASP A 157      10.549  39.361  16.500  1.00 18.58           N
ATOM   1197  CA  ASP A 157      11.622  39.826  17.370  1.00 21.97           C
ATOM   1198  C   ASP A 157      12.884  39.013  17.031  1.00 23.76           C
ATOM   1199  O   ASP A 157      13.377  38.214  17.840  1.00 22.02           O
ATOM   1200  CB  ASP A 157      11.212  39.633  18.839  1.00 22.26           C
ATOM   1201  CG  ASP A 157      12.189  40.262  19.817  1.00 26.19           C
ATOM   1202  OD1 ASP A 157      13.061  41.054  19.405  1.00 28.35           O
ATOM   1203  OD2 ASP A 157      12.087  39.960  21.017  1.00 27.13           O
ATOM   1204  N   TYR A 158      13.369  39.207  15.805  1.00 22.30           N
ATOM   1205  CA  TYR A 158      14.545  38.518  15.297  1.00 16.86           C
ATOM   1206  C   TYR A 158      15.749  39.435  15.379  1.00 18.55           C
ATOM   1207  O   TYR A 158      15.909  40.354  14.581  1.00 18.27           O
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ATOM   1208  CB  TYR A 158      14.293  38.064  13.865  1.00 18.34           C
ATOM   1209  CG  TYR A 158      13.192  37.029  13.741  1.00 18.16           C
ATOM   1210  CD1 TYR A 158      12.571  36.495  14.879  1.00 20.51           C
ATOM   1211  CD2 TYR A 158      12.777  36.575  12.491  1.00 17.28           C
ATOM   1212  CE1 TYR A 158      11.566  35.534  14.773  1.00 21.29           C
ATOM   1213  CE2 TYR A 158      11.772  35.613  12.371  1.00 19.99           C
ATOM   1214  CZ  TYR A 158      11.175  35.094  13.516  1.00 22.91           C
ATOM   1215  OH  TYR A 158      10.215  34.109  13.403  1.00 23.41           O
ATOM   1216  N   ARG A 159      16.578  39.180  16.385  1.00 19.91           N
ATOM   1217  CA  ARG A 159      17.768  39.965  16.667  1.00 18.07           C
ATOM   1218  C   ARG A 159      19.025  39.335  16.057  1.00 18.83           C
ATOM   1219  O   ARG A 159      19.022  38.163  15.693  1.00 16.97           O
ATOM   1220  CB  ARG A 159      17.905  40.108  18.184  1.00 18.99           C
ATOM   1221  CG  ARG A 159      16.600  40.525  18.838  1.00 19.47           C
ATOM   1222  CD  ARG A 159      16.711  40.725  20.340  1.00 22.83           C
ATOM   1223  NE  ARG A 159      15.398  40.997  20.927  1.00 25.17           N
ATOM   1224  CZ  ARG A 159      15.197  41.413  22.175  1.00 32.49           C
ATOM   1225  NH1 ARG A 159      16.227  41.618  22.993  1.00 32.08           N
ATOM   1226  NH2 ARG A 159      13.961  41.607  22.614  1.00 26.27           N
ATOM   1227  N   SER A 160      20.090  40.125  15.935  1.00 19.50           N
ATOM   1228  CA  SER A 160      21.328  39.639  15.342  1.00 21.76           C
ATOM   1229  C   SER A 160      22.555  40.294  15.957  1.00 23.15           C
ATOM   1230  O   SER A 160      22.528  41.468  16.341  1.00 26.23           O
ATOM   1231  CB  SER A 160      21.299  39.855  13.821  1.00 20.64           C
ATOM   1232  OG  SER A 160      21.117  41.217  13.512  1.00 23.32           O
ATOM   1233  N   VAL A 161      23.621  39.511  16.088  1.00 23.62           N
ATOM   1234  CA  VAL A 161      24.874  39.994  16.667  1.00 23.43           C
ATOM   1235  C   VAL A 161      26.043  39.656  15.739  1.00 23.75           C
ATOM   1236  O   VAL A 161      26.073  38.567  15.161  1.00 21.57           O
ATOM   1237  CB  VAL A 161      25.127  39.387  18.094  1.00 20.11           C
ATOM   1238  CG1 VAL A 161      24.158  39.973  19.109  1.00 14.22           C
ATOM   1239  CG2 VAL A 161      24.998  37.865  18.074  1.00 19.26           C
ATOM   1240  N   MET A 162      26.956  40.617  15.551  1.00 25.91           N
ATOM   1241  CA  MET A 162      28.142  40.431  14.698  1.00 26.79           C
ATOM   1242  C   MET A 162      29.383  40.387  15.572  1.00 25.14           C
ATOM   1243  O   MET A 162      29.836  41.406  16.088  1.00 23.88           O
ATOM   1244  CB  MET A 162      28.306  41.554  13.663  1.00 29.36           C
ATOM   1245  CG  MET A 162      27.114  41.757  12.727  1.00 41.15           C
ATOM   1246  SD  MET A 162      26.273  40.237  12.115  1.00 47.49           S
ATOM   1247  CE  MET A 162      27.173  39.939  10.695  1.00 55.04           C
ATOM   1248  N   PRO A 163      29.949  39.193  15.752  1.00 25.96           N
ATOM   1249  CA  PRO A 163      31.148  39.010  16.571  1.00 26.89           C
ATOM   1250  C   PRO A 163      32.420  39.398  15.822  1.00 25.38           C
ATOM   1251  O   PRO A 163      32.465  39.325  14.596  1.00 25.56           O
ATOM   1252  CB  PRO A 163      31.157  37.497  16.849  1.00 23.11           C
ATOM   1253  CG  PRO A 163      29.867  36.956  16.205  1.00 33.13           C
ATOM   1254  CD  PRO A 163      29.534  37.925  15.134  1.00 27.16           C
ATOM   1255  N   THR A 164      33.444  39.797  16.575  1.00 25.26           N
ATOM   1256  CA  THR A 164      34.762  40.127  16.016  1.00 25.72           C
ATOM   1257  C   THR A 164      35.474  38.758  15.893  1.00 25.86           C
ATOM   1258  O   THR A 164      34.796  37.724  15.929  1.00 24.09           O
ATOM   1259  CB  THR A 164      35.548  41.076  16.981  1.00 24.48           C
ATOM   1260  OG1 THR A 164      36.831  41.386  16.426  1.00 22.96           O
ATOM   1261  CG2 THR A 164      35.712  40.450  18.370  1.00 14.06           C
ATOM   1262  N   ASN A 165      36.805  38.730  15.750  1.00 22.75           N
ATOM   1263  CA  ASN A 165      37.523  37.451  15.664  1.00 20.46           C
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ATOM   1264  C   ASN A 165      37.327  36.664  16.955  1.00 20.50           C
ATOM   1265  O   ASN A 165      37.514  37.187  18.044  1.00 22.04           O
ATOM   1266  CB  ASN A 165      39.013  37.668  15.449  1.00 21.07           C
ATOM   1267  CG  ASN A 165      39.303  38.416  14.184  1.00 27.32           C
ATOM   1268  OD1 ASN A 165      38.911  37.989  13.096  1.00 30.55           O
ATOM   1269  ND2 ASN A 165      39.981  39.557  14.310  1.00 28.79           N
ATOM   1270  N   LEU A 166      36.944  35.403  16.821  1.00 21.91           N
ATOM   1271  CA  LEU A 166      36.702  34.551  17.970  1.00 23.81           C
ATOM   1272  C   LEU A 166      37.755  33.489  18.125  1.00 24.20           C
ATOM   1273  O   LEU A 166      38.439  33.136  17.177  1.00 26.50           O
ATOM   1274  CB  LEU A 166      35.361  33.835  17.822  1.00 22.98           C
ATOM   1275  CG  LEU A 166      34.096  34.668  17.686  1.00 23.88           C
ATOM   1276  CD1 LEU A 166      32.922  33.721  17.592  1.00 21.80           C
ATOM   1277  CD2 LEU A 166      33.944  35.613  18.871  1.00 19.47           C
ATOM   1278  N   TYR A 167      37.835  32.938  19.326  1.00 23.82           N
ATOM   1279  CA  TYR A 167      38.766  31.861  19.599  1.00 23.16           C
ATOM   1280  C   TYR A 167      38.276  31.157  20.854  1.00 22.14           C
ATOM   1281  O   TYR A 167      37.419  31.673  21.567  1.00 20.63           O
ATOM   1282  CB  TYR A 167      40.196  32.399  19.786  1.00 21.91           C
ATOM   1283  CG  TYR A 167      40.425  33.155  21.083  1.00 22.67           C
ATOM   1284  CD1 TYR A 167      40.060  34.499  21.212  1.00 21.12           C
ATOM   1285  CD2 TYR A 167      41.018  32.520  22.184  1.00 21.84           C
ATOM   1286  CE1 TYR A 167      40.283  35.191  22.411  1.00 23.41           C
ATOM   1287  CE2 TYR A 167      41.241  33.197  23.377  1.00 20.48           C
ATOM   1288  CZ  TYR A 167      40.874  34.527  23.484  1.00 23.13           C
ATOM   1289  OH  TYR A 167      41.106  35.188  24.664  1.00 26.17           O
ATOM   1290  N   GLY A 168      38.809  29.973  21.116  1.00 22.51           N
ATOM   1291  CA  GLY A 168      38.413  29.246  22.304  1.00 22.22           C
ATOM   1292  C   GLY A 168      38.288  27.768  22.015  1.00 23.94           C
ATOM   1293  O   GLY A 168      38.749  27.301  20.973  1.00 21.69           O
ATOM   1294  N   PRO A 169      37.722  26.993  22.952  1.00 25.73           N
ATOM   1295  CA  PRO A 169      37.561  25.553  22.735  1.00 27.29           C
ATOM   1296  C   PRO A 169      36.636  25.235  21.558  1.00 30.16           C
ATOM   1297  O   PRO A 169      35.716  25.998  21.248  1.00 30.60           O
ATOM   1298  CB  PRO A 169      36.981  25.068  24.066  1.00 28.91           C
ATOM   1299  CG  PRO A 169      36.396  26.302  24.692  1.00 28.86           C
ATOM   1300  CD  PRO A 169      37.386  27.358  24.338  1.00 24.95           C
ATOM   1301  N   HIS A 170      36.908  24.111  20.900  1.00 30.48           N
ATOM   1302  CA  HIS A 170      36.132  23.635  19.757  1.00 33.27           C
ATOM   1303  C   HIS A 170      36.394  24.372  18.483  1.00 32.50           C
ATOM   1304  O   HIS A 170      35.670  24.213  17.500  1.00 35.70           O
ATOM   1305  CB  HIS A 170      34.637  23.568  20.064  1.00 32.59           C
ATOM   1306  CG  HIS A 170      34.321  22.575  21.126  1.00 37.11           C
ATOM   1307  ND1 HIS A 170      34.210  21.224  20.857  1.00 38.96           N
ATOM   1308  CD2 HIS A 170      34.225  22.700  22.469  1.00 39.73           C
ATOM   1309  CE1 HIS A 170      34.072  20.567  22.002  1.00 41.36           C
ATOM   1310  NE2 HIS A 170      34.079  21.446  22.990  1.00 38.88           N
ATOM   1311  N   ASP A 171      37.451  25.170  18.497  1.00 32.94           N
ATOM   1312  CA  ASP A 171      37.851  25.904  17.315  1.00 32.31           C
ATOM   1313  C   ASP A 171      38.518  24.853  16.432  1.00 34.67           C
ATOM   1314  O   ASP A 171      38.732  23.705  16.848  1.00 34.74           O
ATOM   1315  CB  ASP A 171      38.853  27.007  17.685  1.00 29.11           C
ATOM   1316  CG  ASP A 171      38.975  28.090  16.620  1.00 27.98           C
ATOM   1317  OD1 ASP A 171      38.573  27.891  15.452  1.00 31.30           O
ATOM   1318  OD2 ASP A 171      39.490  29.171  16.964  1.00 31.79           O
ATOM   1319  N   ASN A 172      38.820  25.250  15.208  1.00 37.54           N
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ATOM   1320  CA  ASN A 172      39.464  24.382  14.248  1.00 40.57           C
ATOM   1321  C   ASN A 172      40.982  24.489  14.422  1.00 43.13           C
ATOM   1322  O   ASN A 172      41.615  25.403  13.886  1.00 43.13           O
ATOM   1323  CB  ASN A 172      39.042  24.820  12.848  1.00 42.69           C
ATOM   1324  CG  ASN A 172      39.710  24.021  11.753  1.00 45.60           C
ATOM   1325  OD1 ASN A 172      40.460  23.074  12.015  1.00 45.68           O
ATOM   1326  ND2 ASN A 172      39.448  24.411  10.506  1.00 45.39           N
ATOM   1327  N   PHE A 173      41.561  23.570  15.191  1.00 45.69           N
ATOM   1328  CA  PHE A 173      43.002  23.585  15.424  1.00 48.04           C
ATOM   1329  C   PHE A 173      43.803  22.842  14.374  1.00 54.64           C
ATOM   1330  O   PHE A 173      45.030  22.801  14.450  1.00 55.57           O
ATOM   1331  CB  PHE A 173      43.339  23.069  16.814  1.00 39.40           C
ATOM   1332  CG  PHE A 173      43.021  24.043  17.896  1.00 38.63           C
ATOM   1333  CD1 PHE A 173      41.758  24.070  18.475  1.00 37.90           C
ATOM   1334  CD2 PHE A 173      43.975  24.958  18.321  1.00 35.44           C
ATOM   1335  CE1 PHE A 173      41.448  24.993  19.461  1.00 35.31           C
ATOM   1336  CE2 PHE A 173      43.672  25.882  19.302  1.00 34.35           C
ATOM   1337  CZ  PHE A 173      42.406  25.900  19.873  1.00 34.16           C
ATOM   1338  N   HIS A 174      43.104  22.285  13.383  1.00 62.23           N
ATOM   1339  CA  HIS A 174      43.740  21.559  12.285  1.00 65.73           C
ATOM   1340  C   HIS A 174      44.747  22.495  11.603  1.00 69.87           C
ATOM   1341  O   HIS A 174      44.625  23.728  11.678  1.00 68.58           O
ATOM   1342  CB  HIS A 174      42.681  21.063  11.279  1.00 61.11           C
ATOM   1343  N   PRO A 175      45.791  21.916  10.981  1.00 74.50           N
ATOM   1344  CA  PRO A 175      46.850  22.655  10.279  1.00 74.82           C
ATOM   1345  C   PRO A 175      46.325  23.481   9.111  1.00 75.18           C
ATOM   1346  O   PRO A 175      46.947  24.460   8.696  1.00 77.75           O
ATOM   1347  CB  PRO A 175      47.769  21.537   9.789  1.00 77.12           C
ATOM   1348  CG  PRO A 175      46.817  20.367   9.608  1.00 78.25           C
ATOM   1349  CD  PRO A 175      46.010  20.460  10.870  1.00 75.04           C
ATOM   1350  N   SER A 176      45.165  23.084   8.604  1.00 75.10           N
ATOM   1351  CA  SER A 176      44.527  23.751   7.479  1.00 75.72           C
ATOM   1352  C   SER A 176      43.883  25.104   7.842  1.00 75.78           C
ATOM   1353  O   SER A 176      43.696  25.953   6.959  1.00 75.47           O
ATOM   1354  CB  SER A 176      43.469  22.823   6.879  1.00 76.11           C
ATOM   1355  OG  SER A 176      43.936  21.484   6.842  1.00 77.64           O
ATOM   1356  N   ASN A 177      43.551  25.302   9.125  1.00 72.94           N
ATOM   1357  CA  ASN A 177      42.909  26.544   9.580  1.00 69.12           C
ATOM   1358  C   ASN A 177      43.813  27.764   9.532  1.00 65.94           C
ATOM   1359  O   ASN A 177      44.891  27.780  10.144  1.00 65.45           O
ATOM   1360  CB  ASN A 177      42.336  26.406  10.997  1.00 71.16           C
ATOM   1361  CG  ASN A 177      41.472  27.609  11.401  1.00 71.66           C
ATOM   1362  OD1 ASN A 177      41.049  28.397  10.548  1.00 73.31           O
ATOM   1363  ND2 ASN A 177      41.199  27.744  12.697  1.00 67.25           N
ATOM   1364  N   SER A 178      43.317  28.806   8.860  1.00 61.37           N
ATOM   1365  CA  SER A 178      44.045  30.061   8.684  1.00 56.06           C
ATOM   1366  C   SER A 178      43.887  31.098   9.808  1.00 54.27           C
ATOM   1367  O   SER A 178      44.649  32.072   9.848  1.00 55.12           O
ATOM   1368  CB  SER A 178      43.701  30.703   7.326  1.00 52.63           C
ATOM   1369  OG  SER A 178      42.422  31.308   7.338  1.00 46.99           O
ATOM   1370  N   HIS A 179      42.913  30.911  10.705  1.00 48.10           N
ATOM   1371  CA  HIS A 179      42.720  31.868  11.795  1.00 42.80           C
ATOM   1372  C   HIS A 179      43.964  31.900  12.674  1.00 37.82           C
ATOM   1373  O   HIS A 179      44.507  30.866  13.073  1.00 33.48           O
ATOM   1374  CB  HIS A 179      41.422  31.594  12.559  1.00 46.48           C
ATOM   1375  CG  HIS A 179      40.199  31.773  11.712  1.00 51.98           C
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ATOM   1376  ND1 HIS A 179      39.234  30.797  11.577  1.00 57.89           N
ATOM   1377  CD2 HIS A 179      39.838  32.774  10.873  1.00 52.35           C
ATOM   1378  CE1 HIS A 179      38.342  31.186  10.682  1.00 56.31           C
ATOM   1379  NE2 HIS A 179      38.686  32.383  10.240  1.00 52.76           N
ATOM   1380  N   VAL A 180      44.470  33.112  12.852  1.00 32.00           N
ATOM   1381  CA  VAL A 180      45.691  33.368  13.579  1.00 32.18           C
ATOM   1382  C   VAL A 180      45.869  32.723  14.958  1.00 28.84           C
ATOM   1383  O   VAL A 180      46.915  32.122  15.208  1.00 30.55           O
ATOM   1384  CB  VAL A 180      46.007  34.898  13.586  1.00 33.53           C
ATOM   1385  CG1 VAL A 180      45.111  35.639  14.548  1.00 30.46           C
ATOM   1386  CG2 VAL A 180      47.468  35.139  13.893  1.00 37.25           C
ATOM   1387  N   ILE A 181      44.870  32.800  15.836  1.00 25.22           N
ATOM   1388  CA  ILE A 181      45.022  32.200  17.165  1.00 23.61           C
ATOM   1389  C   ILE A 181      45.219  30.666  17.161  1.00 24.19           C
ATOM   1390  O   ILE A 181      46.229  30.181  17.668  1.00 23.46           O
ATOM   1391  CB  ILE A 181      43.935  32.682  18.146  1.00 19.90           C
ATOM   1392  CG1 ILE A 181      44.168  34.165  18.440  1.00 19.23           C
ATOM   1393  CG2 ILE A 181      43.969  31.876  19.445  1.00 17.91           C
ATOM   1394  CD1 ILE A 181      43.142  34.791  19.337  1.00 20.39           C
ATOM   1395  N   PRO A 182      44.275  29.888  16.592  1.00 22.56           N
ATOM   1396  CA  PRO A 182      44.485  28.435  16.583  1.00 22.55           C
ATOM   1397  C   PRO A 182      45.710  28.011  15.767  1.00 23.61           C
ATOM   1398  O   PRO A 182      46.362  27.020  16.100  1.00 22.98           O
ATOM   1399  CB  PRO A 182      43.182  27.894  15.983  1.00 21.26           C
ATOM   1400  CG  PRO A 182      42.619  29.051  15.235  1.00 22.20           C
ATOM   1401  CD  PRO A 182      42.908  30.206  16.149  1.00 24.10           C
ATOM   1402  N   ALA A 183      46.021  28.760  14.708  1.00 21.58           N
ATOM   1403  CA  ALA A 183      47.184  28.462  13.872  1.00 24.53           C
ATOM   1404  C   ALA A 183      48.470  28.681  14.667  1.00 25.64           C
ATOM   1405  O   ALA A 183      49.384  27.850  14.630  1.00 27.30           O
ATOM   1406  CB  ALA A 183      47.196  29.335  12.620  1.00 24.35           C
ATOM   1407  N   LEU A 184      48.551  29.809  15.368  1.00 24.99           N
ATOM   1408  CA  LEU A 184      49.734  30.101  16.167  1.00 25.37           C
ATOM   1409  C   LEU A 184      49.852  29.214  17.415  1.00 25.99           C
ATOM   1410  O   LEU A 184      50.960  28.834  17.792  1.00 27.56           O
ATOM   1411  CB  LEU A 184      49.810  31.585  16.528  1.00 22.23           C
ATOM   1412  CG  LEU A 184      50.182  32.511  15.363  1.00 25.96           C
ATOM   1413  CD1 LEU A 184      50.392  33.928  15.884  1.00 20.43           C
ATOM   1414  CD2 LEU A 184      51.446  31.999  14.655  1.00 19.43           C
ATOM   1415  N   LEU A 185      48.733  28.883  18.060  1.00 25.29           N
ATOM   1416  CA  LEU A 185      48.795  28.014  19.240  1.00 24.39           C
ATOM   1417  C   LEU A 185      49.412  26.691  18.848  1.00 24.56           C
ATOM   1418  O   LEU A 185      50.254  26.164  19.557  1.00 27.60           O
ATOM   1419  CB  LEU A 185      47.411  27.760  19.836  1.00 22.89           C
ATOM   1420  CG  LEU A 185      46.995  28.738  20.934  1.00 27.62           C
ATOM   1421  CD1 LEU A 185      45.544  28.477  21.328  1.00 27.37           C
ATOM   1422  CD2 LEU A 185      47.921  28.612  22.142  1.00 22.78           C
ATOM   1423  N   ARG A 186      49.017  26.194  17.684  1.00 25.56           N
ATOM   1424  CA  ARG A 186      49.501  24.931  17.150  1.00 27.87           C
ATOM   1425  C   ARG A 186      50.987  24.980  16.791  1.00 26.21           C
ATOM   1426  O   ARG A 186      51.745  24.083  17.139  1.00 26.14           O
ATOM   1427  CB  ARG A 186      48.683  24.580  15.911  1.00 32.73           C
ATOM   1428  CG  ARG A 186      48.985  23.234  15.310  1.00 44.90           C
ATOM   1429  CD  ARG A 186      48.384  22.122  16.156  1.00 57.26           C
ATOM   1430  NE  ARG A 186      48.617  20.808  15.556  1.00 65.19           N
ATOM   1431  CZ  ARG A 186      47.742  20.151  14.798  1.00 68.62           C
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ATOM   1432  NH1 ARG A 186      46.548  20.668  14.537  1.00 72.49           N
ATOM   1433  NH2 ARG A 186      48.078  18.985  14.266  1.00 73.83           N
ATOM   1434  N   ARG A 187      51.394  26.026  16.081  1.00 24.48           N
ATOM   1435  CA  ARG A 187      52.782  26.182  15.669  1.00 24.74           C
ATOM   1436  C   ARG A 187      53.732  26.364  16.846  1.00 24.74           C
ATOM   1437  O   ARG A 187      54.818  25.788  16.856  1.00 26.24           O
ATOM   1438  CB  ARG A 187      52.929  27.358  14.710  1.00 23.68           C
ATOM   1439  CG  ARG A 187      52.119  27.208  13.449  1.00 31.34           C
ATOM   1440  CD  ARG A 187      52.396  28.351  12.507  1.00 34.19           C
ATOM   1441  NE  ARG A 187      53.818  28.415  12.179  1.00 36.53           N
ATOM   1442  CZ  ARG A 187      54.424  29.479  11.666  1.00 34.23           C
ATOM   1443  NH1 ARG A 187      53.731  30.590  11.417  1.00 32.29           N
ATOM   1444  NH2 ARG A 187      55.722  29.418  11.390  1.00 33.65           N
ATOM   1445  N   PHE A 188      53.341  27.180  17.819  1.00 21.57           N
ATOM   1446  CA  PHE A 188      54.192  27.400  18.983  1.00 24.91           C
ATOM   1447  C   PHE A 188      54.297  26.157  19.833  1.00 24.73           C
ATOM   1448  O   PHE A 188      55.337  25.904  20.420  1.00 26.48           O
ATOM   1449  CB  PHE A 188      53.725  28.604  19.806  1.00 21.66           C
ATOM   1450  CG  PHE A 188      54.212  29.911  19.256  1.00 26.26           C
ATOM   1451  CD1 PHE A 188      55.574  30.193  19.230  1.00 26.59           C
ATOM   1452  CD2 PHE A 188      53.327  30.822  18.680  1.00 27.23           C
ATOM   1453  CE1 PHE A 188      56.060  31.364  18.629  1.00 30.17           C
ATOM   1454  CE2 PHE A 188      53.797  31.998  18.074  1.00 27.73           C
ATOM   1455  CZ  PHE A 188      55.168  32.265  18.045  1.00 28.16           C
ATOM   1456  N   HIS A 189      53.228  25.364  19.858  1.00 27.07           N
ATOM   1457  CA  HIS A 189      53.192  24.115  20.617  1.00 28.53           C
ATOM   1458  C   HIS A 189      54.220  23.126  20.048  1.00 27.95           C
ATOM   1459  O   HIS A 189      55.014  22.535  20.783  1.00 27.69           O
ATOM   1460  CB  HIS A 189      51.786  23.497  20.551  1.00 28.59           C
ATOM   1461  CG  HIS A 189      51.704  22.119  21.129  1.00 32.18           C
ATOM   1462  ND1 HIS A 189      51.693  21.881  22.486  1.00 30.13           N
ATOM   1463  CD2 HIS A 189      51.678  20.902  20.530  1.00 29.12           C
ATOM   1464  CE1 HIS A 189      51.672  20.577  22.699  1.00 30.17           C
ATOM   1465  NE2 HIS A 189      51.662  19.960  21.530  1.00 29.70           N
ATOM   1466  N   GLU A 190      54.183  22.946  18.734  1.00 25.23           N
ATOM   1467  CA  GLU A 190      55.100  22.040  18.074  1.00 29.45           C
ATOM   1468  C   GLU A 190      56.533  22.531  18.072  1.00 30.02           C
ATOM   1469  O   GLU A 190      57.458  21.740  18.253  1.00 31.74           O
ATOM   1470  CB  GLU A 190      54.614  21.737  16.678  1.00 33.57           C
ATOM   1471  CG  GLU A 190      53.620  20.605  16.707  1.00 50.97           C
ATOM   1472  CD  GLU A 190      52.554  20.755  15.660  1.00 61.60           C
ATOM   1473  OE1 GLU A 190      52.889  20.759  14.449  1.00 68.67           O
ATOM   1474  OE2 GLU A 190      51.373  20.868  16.049  1.00 67.78           O
ATOM   1475  N   ALA A 191      56.719  23.837  17.903  1.00 29.25           N
ATOM   1476  CA  ALA A 191      58.047  24.431  17.926  1.00 25.71           C
ATOM   1477  C   ALA A 191      58.652  24.229  19.322  1.00 24.60           C
ATOM   1478  O   ALA A 191      59.846  23.982  19.443  1.00 26.03           O
ATOM   1479  CB  ALA A 191      57.970  25.920  17.588  1.00 21.99           C
ATOM   1480  N   THR A 192      57.817  24.306  20.360  1.00 23.89           N
ATOM   1481  CA  THR A 192      58.258  24.127  21.746  1.00 25.70           C
ATOM   1482  C   THR A 192      58.635  22.665  21.980  1.00 30.82           C
ATOM   1483  O   THR A 192      59.683  22.368  22.566  1.00 34.40           O
ATOM   1484  CB  THR A 192      57.151  24.524  22.743  1.00 24.15           C
ATOM   1485  OG1 THR A 192      56.814  25.908  22.567  1.00 26.94           O
ATOM   1486  CG2 THR A 192      57.617  24.315  24.168  1.00 18.91           C
ATOM   1487  N   ALA A 193      57.787  21.765  21.482  1.00 33.20           N
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ATOM   1488  CA  ALA A 193      57.982  20.322  21.595  1.00 35.47           C
ATOM   1489  C   ALA A 193      59.223  19.847  20.832  1.00 38.19           C
ATOM   1490  O   ALA A 193      59.937  18.960  21.292  1.00 41.62           O
ATOM   1491  CB  ALA A 193      56.743  19.598  21.075  1.00 32.40           C
ATOM   1492  N   GLN A 194      59.461  20.430  19.656  1.00 39.55           N
ATOM   1493  CA  GLN A 194      60.603  20.074  18.813  1.00 39.78           C
ATOM   1494  C   GLN A 194      61.828  20.907  19.163  1.00 40.87           C
ATOM   1495  O   GLN A 194      62.896  20.736  18.575  1.00 43.65           O
ATOM   1496  CB  GLN A 194      60.245  20.249  17.333  1.00 44.89           C
ATOM   1497  CG  GLN A 194      59.170  19.265  16.838  1.00 55.10           C
ATOM   1498  CD  GLN A 194      58.401  19.744  15.598  1.00 62.27           C
ATOM   1499  OE1 GLN A 194      57.292  19.257  15.317  1.00 63.37           O
ATOM   1500  NE2 GLN A 194      58.977  20.703  14.862  1.00 61.98           N
ATOM   1501  N   ASN A 195      61.674  21.808  20.124  1.00 40.88           N
ATOM   1502  CA  ASN A 195      62.755  22.674  20.569  1.00 43.91           C
ATOM   1503  C   ASN A 195      63.405  23.503  19.437  1.00 41.72           C
ATOM   1504  O   ASN A 195      64.623  23.734  19.436  1.00 38.80           O
ATOM   1505  CB  ASN A 195      63.810  21.846  21.305  1.00 53.95           C
ATOM   1506  CG  ASN A 195      64.498  22.637  22.397  1.00 65.59           C
ATOM   1507  OD1 ASN A 195      65.700  22.505  22.605  1.00 75.35           O
ATOM   1508  ND2 ASN A 195      63.732  23.480  23.099  1.00 69.22           N
ATOM   1509  N   ALA A 196      62.567  23.970  18.503  1.00 36.58           N
ATOM   1510  CA  ALA A 196      62.998  24.777  17.360  1.00 30.15           C
ATOM   1511  C   ALA A 196      63.588  26.109  17.808  1.00 30.83           C
ATOM   1512  O   ALA A 196      63.037  26.791  18.662  1.00 29.22           O
ATOM   1513  CB  ALA A 196      61.828  25.013  16.427  1.00 28.38           C
ATOM   1514  N   PRO A 197      64.729  26.502  17.219  1.00 31.98           N
ATOM   1515  CA  PRO A 197      65.391  27.763  17.579  1.00 28.21           C
ATOM   1516  C   PRO A 197      64.508  29.006  17.366  1.00 28.67           C
ATOM   1517  O   PRO A 197      64.549  29.941  18.173  1.00 24.78           O
ATOM   1518  CB  PRO A 197      66.628  27.759  16.676  1.00 28.56           C
ATOM   1519  CG  PRO A 197      66.181  26.954  15.491  1.00 33.08           C
ATOM   1520  CD  PRO A 197      65.424  25.829  16.107  1.00 28.22           C
ATOM   1521  N   ASP A 198      63.692  28.998  16.314  1.00 27.04           N
ATOM   1522  CA  ASP A 198      62.799  30.124  16.034  1.00 28.66           C
ATOM   1523  C   ASP A 198      61.508  29.756  15.298  1.00 27.01           C
ATOM   1524  O   ASP A 198      61.358  28.650  14.775  1.00 23.15           O
ATOM   1525  CB  ASP A 198      63.540  31.220  15.257  1.00 32.19           C
ATOM   1526  CG  ASP A 198      64.078  30.743  13.912  1.00 37.91           C
ATOM   1527  OD1 ASP A 198      63.888  29.568  13.526  1.00 44.89           O
ATOM   1528  OD2 ASP A 198      64.702  31.562  13.220  1.00 47.35           O
ATOM   1529  N   VAL A 199      60.577  30.705  15.278  1.00 26.34           N
ATOM   1530  CA  VAL A 199      59.299  30.545  14.591  1.00 24.87           C
ATOM   1531  C   VAL A 199      59.132  31.810  13.769  1.00 23.03           C
ATOM   1532  O   VAL A 199      59.094  32.911  14.317  1.00 21.82           O
ATOM   1533  CB  VAL A 199      58.109  30.426  15.564  1.00 26.68           C
ATOM   1534  CG1 VAL A 199      56.801  30.425  14.776  1.00 24.34           C
ATOM   1535  CG2 VAL A 199      58.221  29.156  16.378  1.00 24.54           C
ATOM   1536  N   VAL A 200      59.092  31.649  12.454  1.00 21.37           N
ATOM   1537  CA  VAL A 200      58.958  32.780  11.557  1.00 21.47           C
ATOM   1538  C   VAL A 200      57.507  33.012  11.186  1.00 21.22           C
ATOM   1539  O   VAL A 200      56.815  32.093  10.766  1.00 23.29           O
ATOM   1540  CB  VAL A 200      59.807  32.587  10.275  1.00 22.51           C
ATOM   1541  CG1 VAL A 200      59.643  33.784   9.332  1.00 20.18           C
ATOM   1542  CG2 VAL A 200      61.281  32.383  10.648  1.00 17.80           C
ATOM   1543  N   VAL A 201      57.045  34.240  11.394  1.00 21.11           N
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ATOM   1544  CA  VAL A 201      55.684  34.640  11.077  1.00 18.06           C
ATOM   1545  C   VAL A 201      55.781  35.669   9.958  1.00 19.48           C
ATOM   1546  O   VAL A 201      56.614  36.561  10.020  1.00 21.36           O
ATOM   1547  CB  VAL A 201      55.016  35.282  12.293  1.00 20.82           C
ATOM   1548  CG1 VAL A 201      53.594  35.697  11.943  1.00 23.30           C
ATOM   1549  CG2 VAL A 201      55.004  34.292  13.460  1.00 18.66           C
ATOM   1550  N   TRP A 202      54.956  35.522   8.925  1.00 18.77           N
ATOM   1551  CA  TRP A 202      54.955  36.441   7.786  1.00 19.76           C
ATOM   1552  C   TRP A 202      54.423  37.805   8.191  1.00 21.33           C
ATOM   1553  O   TRP A 202      53.460  37.890   8.950  1.00 24.35           O
ATOM   1554  CB  TRP A 202      54.042  35.925   6.675  1.00 20.53           C
ATOM   1555  CG  TRP A 202      54.400  34.619   6.028  1.00 20.53           C
ATOM   1556  CD1 TRP A 202      53.528  33.768   5.418  1.00 19.71           C
ATOM   1557  CD2 TRP A 202      55.710  34.062   5.823  1.00 23.30           C
ATOM   1558  NE1 TRP A 202      54.203  32.731   4.830  1.00 23.83           N
ATOM   1559  CE2 TRP A 202      55.547  32.880   5.059  1.00 23.25           C
ATOM   1560  CE3 TRP A 202      57.009  34.448   6.198  1.00 26.18           C
ATOM   1561  CZ2 TRP A 202      56.626  32.079   4.656  1.00 19.84           C
ATOM   1562  CZ3 TRP A 202      58.089  33.647   5.796  1.00 27.43           C
ATOM   1563  CH2 TRP A 202      57.885  32.479   5.031  1.00 23.13           C
ATOM   1564  N   GLY A 203      55.017  38.864   7.651  1.00 19.73           N
ATOM   1565  CA  GLY A 203      54.554  40.202   7.963  1.00 19.65           C
ATOM   1566  C   GLY A 203      55.458  40.919   8.940  1.00 22.07           C
ATOM   1567  O   GLY A 203      56.448  40.357   9.390  1.00 20.84           O
ATOM   1568  N   SER A 204      55.088  42.147   9.294  1.00 20.09           N
ATOM   1569  CA  SER A 204      55.868  42.972  10.205  1.00 19.23           C
ATOM   1570  C   SER A 204      55.434  42.868  11.663  1.00 18.99           C
ATOM   1571  O   SER A 204      56.162  43.297  12.560  1.00 19.85           O
ATOM   1572  CB  SER A 204      55.772  44.431   9.770  1.00 19.16           C
ATOM   1573  OG  SER A 204      54.479  44.947  10.046  1.00 21.60           O
ATOM   1574  N   GLY A 205      54.242  42.320  11.891  1.00 19.27           N
ATOM   1575  CA  GLY A 205      53.705  42.179  13.237  1.00 17.20           C
ATOM   1576  C   GLY A 205      53.020  43.443  13.753  1.00 19.03           C
ATOM   1577  O   GLY A 205      52.455  43.447  14.848  1.00 18.09           O
ATOM   1578  N   THR A 206      53.058  44.514  12.959  1.00 18.28           N
ATOM   1579  CA  THR A 206      52.452  45.781  13.350  1.00 18.39           C
ATOM   1580  C   THR A 206      50.935  45.904  13.203  1.00 18.82           C
ATOM   1581  O   THR A 206      50.333  46.707  13.904  1.00 21.01           O
ATOM   1582  CB  THR A 206      53.092  46.997  12.620  1.00 16.36           C
ATOM   1583  OG1 THR A 206      52.863  46.894  11.216  1.00 18.29           O
ATOM   1584  CG2 THR A 206      54.577  47.056  12.862  1.00 13.78           C
ATOM   1585  N   PRO A 207      50.298  45.162  12.272  1.00 19.37           N
ATOM   1586  CA  PRO A 207      48.842  45.342  12.190  1.00 19.36           C
ATOM   1587  C   PRO A 207      48.074  44.991  13.454  1.00 20.77           C
ATOM   1588  O   PRO A 207      48.467  44.101  14.217  1.00 21.58           O
ATOM   1589  CB  PRO A 207      48.438  44.502  10.976  1.00 20.41           C
ATOM   1590  CG  PRO A 207      49.599  43.616  10.723  1.00 24.83           C
ATOM   1591  CD  PRO A 207      50.796  44.399  11.116  1.00 18.81           C
ATOM   1592  N   MET A 208      47.018  45.752  13.711  1.00 20.77           N
ATOM   1593  CA  MET A 208      46.206  45.549  14.904  1.00 25.46           C
ATOM   1594  C   MET A 208      44.884  44.812  14.685  1.00 26.38           C
ATOM   1595  O   MET A 208      44.144  45.105  13.746  1.00 26.67           O
ATOM   1596  CB  MET A 208      45.980  46.885  15.595  1.00 27.61           C
ATOM   1597  CG  MET A 208      47.277  47.505  16.085  1.00 33.50           C
ATOM   1598  SD  MET A 208      47.067  49.146  16.732  1.00 40.06           S
ATOM   1599  CE  MET A 208      47.200  50.087  15.211  1.00 38.63           C
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ATOM   1600  N   ARG A 209      44.599  43.863  15.576  1.00 24.72           N
ATOM   1601  CA  ARG A 209      43.392  43.049  15.501  1.00 24.45           C
ATOM   1602  C   ARG A 209      42.696  42.958  16.844  1.00 22.34           C
ATOM   1603  O   ARG A 209      43.283  43.212  17.882  1.00 24.61           O
ATOM   1604  CB  ARG A 209      43.735  41.635  15.020  1.00 24.89           C
ATOM   1605  CG  ARG A 209      44.381  41.573  13.645  1.00 24.38           C
ATOM   1606  CD  ARG A 209      43.482  42.192  12.595  1.00 26.11           C
ATOM   1607  NE  ARG A 209      44.063  42.119  11.255  1.00 24.33           N
ATOM   1608  CZ  ARG A 209      44.497  43.165  10.555  1.00 27.22           C
ATOM   1609  NH1 ARG A 209      44.437  44.395  11.056  1.00 25.64           N
ATOM   1610  NH2 ARG A 209      44.958  42.985   9.324  1.00 26.03           N
ATOM   1611  N   GLU A 210      41.440  42.554  16.811  1.00 22.03           N
ATOM   1612  CA  GLU A 210      40.632  42.422  18.014  1.00 22.70           C
ATOM   1613  C   GLU A 210      40.230  40.963  18.159  1.00 21.38           C
ATOM   1614  O   GLU A 210      39.893  40.316  17.175  1.00 23.72           O
ATOM   1615  CB  GLU A 210      39.387  43.295  17.883  1.00 19.12           C
ATOM   1616  CG  GLU A 210      38.414  43.167  19.024  1.00 20.78           C
ATOM   1617  CD  GLU A 210      37.101  43.854  18.727  1.00 24.49           C
ATOM   1618  OE1 GLU A 210      36.802  44.048  17.532  1.00 23.90           O
ATOM   1619  OE2 GLU A 210      36.361  44.190  19.677  1.00 23.80           O
ATOM   1620  N   PHE A 211      40.275  40.446  19.382  1.00 18.27           N
ATOM   1621  CA  PHE A 211      39.928  39.052  19.627  1.00 22.21           C
ATOM   1622  C   PHE A 211      38.987  38.930  20.819  1.00 23.89           C
ATOM   1623  O   PHE A 211      39.132  39.642  21.810  1.00 27.69           O
ATOM   1624  CB  PHE A 211      41.197  38.217  19.874  1.00 20.50           C
ATOM   1625  CG  PHE A 211      42.172  38.272  18.750  1.00 22.32           C
ATOM   1626  CD1 PHE A 211      41.950  37.539  17.590  1.00 23.71           C
ATOM   1627  CD2 PHE A 211      43.279  39.121  18.813  1.00 21.98           C
ATOM   1628  CE1 PHE A 211      42.816  37.657  16.493  1.00 23.37           C
ATOM   1629  CE2 PHE A 211      44.150  39.247  17.726  1.00 22.32           C
ATOM   1630  CZ  PHE A 211      43.914  38.512  16.562  1.00 21.55           C
ATOM   1631  N   LEU A 212      38.040  38.005  20.722  1.00 23.47           N
ATOM   1632  CA  LEU A 212      37.069  37.779  21.780  1.00 22.49           C
ATOM   1633  C   LEU A 212      36.974  36.282  22.063  1.00 21.88           C
ATOM   1634  O   LEU A 212      36.935  35.476  21.134  1.00 20.71           O
ATOM   1635  CB  LEU A 212      35.703  38.308  21.343  1.00 22.00           C
ATOM   1636  CG  LEU A 212      34.533  38.159  22.318  1.00 25.59           C
ATOM   1637  CD1 LEU A 212      34.666  39.192  23.444  1.00 25.63           C
ATOM   1638  CD2 LEU A 212      33.220  38.340  21.583  1.00 22.24           C
ATOM   1639  N   HIS A 213      37.001  35.905  23.339  1.00 20.47           N
ATOM   1640  CA  HIS A 213      36.883  34.493  23.687  1.00 22.20           C
ATOM   1641  C   HIS A 213      35.436  34.055  23.413  1.00 22.43           C
ATOM   1642  O   HIS A 213      34.492  34.792  23.677  1.00 21.33           O
ATOM   1643  CB  HIS A 213      37.263  34.250  25.151  1.00 22.61           C
ATOM   1644  CG  HIS A 213      37.383  32.795  25.507  1.00 21.56           C
ATOM   1645  ND1 HIS A 213      36.288  31.985  25.712  1.00 23.11           N
ATOM   1646  CD2 HIS A 213      38.472  32.005  25.661  1.00 20.47           C
ATOM   1647  CE1 HIS A 213      36.696  30.754  25.975  1.00 21.81           C
ATOM   1648  NE2 HIS A 213      38.015  30.740  25.951  1.00 26.94           N
ATOM   1649  N   VAL A 214      35.271  32.849  22.888  1.00 25.55           N
ATOM   1650  CA  VAL A 214      33.953  32.326  22.548  1.00 25.86           C
ATOM   1651  C   VAL A 214      32.959  32.265  23.717  1.00 27.36           C
ATOM   1652  O   VAL A 214      31.748  32.317  23.504  1.00 28.88           O
ATOM   1653  CB  VAL A 214      34.076  30.960  21.814  1.00 25.10           C
ATOM   1654  CG1 VAL A 214      34.380  29.823  22.798  1.00 25.06           C
ATOM   1655  CG2 VAL A 214      32.837  30.686  20.980  1.00 26.93           C
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ATOM   1656  N   ASP A 215      33.453  32.182  24.951  1.00 29.40           N
ATOM   1657  CA  ASP A 215      32.546  32.140  26.101  1.00 27.62           C
ATOM   1658  C   ASP A 215      31.988  33.518  26.371  1.00 26.64           C
ATOM   1659  O   ASP A 215      30.856  33.655  26.833  1.00 28.84           O
ATOM   1660  CB  ASP A 215      33.217  31.559  27.346  1.00 25.75           C
ATOM   1661  CG  ASP A 215      33.418  30.058  27.247  1.00 26.44           C
ATOM   1662  OD1 ASP A 215      32.732  29.397  26.441  1.00 27.37           O
ATOM   1663  OD2 ASP A 215      34.275  29.531  27.971  1.00 31.18           O
ATOM   1664  N   ASP A 216      32.787  34.542  26.104  1.00 24.22           N
ATOM   1665  CA  ASP A 216      32.307  35.898  26.271  1.00 24.84           C
ATOM   1666  C   ASP A 216      31.277  36.122  25.156  1.00 27.00           C
ATOM   1667  O   ASP A 216      30.269  36.788  25.351  1.00 28.29           O
ATOM   1668  CB  ASP A 216      33.450  36.899  26.128  1.00 27.51           C
ATOM   1669  CG  ASP A 216      34.002  37.372  27.467  1.00 30.57           C
ATOM   1670  OD1 ASP A 216      33.296  37.287  28.501  1.00 33.61           O
ATOM   1671  OD2 ASP A 216      35.150  37.867  27.468  1.00 30.91           O
ATOM   1672  N   MET A 217      31.547  35.563  23.981  1.00 26.79           N
ATOM   1673  CA  MET A 217      30.641  35.683  22.849  1.00 26.75           C
ATOM   1674  C   MET A 217      29.275  35.096  23.247  1.00 27.44           C
ATOM   1675  O   MET A 217      28.244  35.759  23.116  1.00 27.67           O
ATOM   1676  CB  MET A 217      31.220  34.936  21.641  1.00 30.32           C
ATOM   1677  CG  MET A 217      30.258  34.764  20.471  1.00 34.35           C
ATOM   1678  SD  MET A 217      29.777  36.387  19.891  1.00 44.98           S
ATOM   1679  CE  MET A 217      28.212  35.999  19.186  1.00 51.43           C
ATOM   1680  N   ALA A 218      29.282  33.866  23.756  1.00 24.61           N
ATOM   1681  CA  ALA A 218      28.060  33.198  24.181  1.00 23.32           C
ATOM   1682  C   ALA A 218      27.296  34.030  25.225  1.00 25.63           C
ATOM   1683  O   ALA A 218      26.078  34.161  25.149  1.00 27.74           O
ATOM   1684  CB  ALA A 218      28.389  31.828  24.733  1.00 17.41           C
ATOM   1685  N   ALA A 219      28.020  34.624  26.171  1.00 24.15           N
ATOM   1686  CA  ALA A 219      27.403  35.431  27.214  1.00 24.70           C
ATOM   1687  C   ALA A 219      26.711  36.660  26.649  1.00 27.02           C
ATOM   1688  O   ALA A 219      25.590  36.978  27.048  1.00 28.33           O
ATOM   1689  CB  ALA A 219      28.437  35.841  28.246  1.00 23.86           C
ATOM   1690  N   ALA A 220      27.384  37.360  25.739  1.00 27.13           N
ATOM   1691  CA  ALA A 220      26.817  38.554  25.111  1.00 26.98           C
ATOM   1692  C   ALA A 220      25.582  38.167  24.301  1.00 27.38           C
ATOM   1693  O   ALA A 220      24.561  38.854  24.344  1.00 29.86           O
ATOM   1694  CB  ALA A 220      27.845  39.228  24.208  1.00 22.63           C
ATOM   1695  N   SER A 221      25.673  37.041  23.598  1.00 25.10           N
ATOM   1696  CA  SER A 221      24.574  36.547  22.774  1.00 27.22           C
ATOM   1697  C   SER A 221      23.284  36.325  23.555  1.00 26.44           C
ATOM   1698  O   SER A 221      22.204  36.757  23.133  1.00 25.90           O
ATOM   1699  CB  SER A 221      24.984  35.244  22.081  1.00 25.03           C
ATOM   1700  OG  SER A 221      25.993  35.506  21.128  1.00 30.18           O
ATOM   1701  N   ILE A 222      23.413  35.608  24.666  1.00 25.87           N
ATOM   1702  CA  ILE A 222      22.304  35.289  25.546  1.00 26.21           C
ATOM   1703  C   ILE A 222      21.763  36.564  26.175  1.00 28.52           C
ATOM   1704  O   ILE A 222      20.553  36.723  26.335  1.00 31.79           O
ATOM   1705  CB  ILE A 222      22.760  34.318  26.635  1.00 26.42           C
ATOM   1706  CG1 ILE A 222      23.171  32.989  25.988  1.00 24.50           C
ATOM   1707  CG2 ILE A 222      21.652  34.105  27.650  1.00 25.73           C
ATOM   1708  CD1 ILE A 222      23.907  32.040  26.907  1.00 25.35           C
ATOM   1709  N   HIS A 223      22.666  37.493  26.478  1.00 27.44           N
ATOM   1710  CA  HIS A 223      22.298  38.768  27.075  1.00 26.97           C
ATOM   1711  C   HIS A 223      21.391  39.547  26.112  1.00 30.21           C
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ATOM   1712  O   HIS A 223      20.286  39.968  26.481  1.00 29.75           O
ATOM   1713  CB  HIS A 223      23.568  39.565  27.394  1.00 24.64           C
ATOM   1714  CG  HIS A 223      23.316  40.973  27.848  1.00 28.40           C
ATOM   1715  ND1 HIS A 223      23.212  41.321  29.178  1.00 30.53           N
ATOM   1716  CD2 HIS A 223      23.174  42.124  27.147  1.00 28.31           C
ATOM   1717  CE1 HIS A 223      23.018  42.625  29.275  1.00 30.32           C
ATOM   1718  NE2 HIS A 223      22.991  43.136  28.058  1.00 28.41           N
ATOM   1719  N   VAL A 224      21.870  39.728  24.881  1.00 29.87           N
ATOM   1720  CA  VAL A 224      21.130  40.443  23.850  1.00 25.73           C
ATOM   1721  C   VAL A 224      19.810  39.740  23.560  1.00 24.95           C
ATOM   1722  O   VAL A 224      18.776  40.386  23.437  1.00 27.31           O
ATOM   1723  CB  VAL A 224      21.971  40.588  22.566  1.00 26.87           C
ATOM   1724  CG1 VAL A 224      21.125  41.147  21.423  1.00 25.42           C
ATOM   1725  CG2 VAL A 224      23.154  41.508  22.835  1.00 22.37           C
ATOM   1726  N   MET A 225      19.842  38.416  23.497  1.00 25.08           N
ATOM   1727  CA  MET A 225      18.630  37.644  23.260  1.00 28.73           C
ATOM   1728  C   MET A 225      17.583  37.896  24.359  1.00 32.64           C
ATOM   1729  O   MET A 225      16.400  38.099  24.071  1.00 32.02           O
ATOM   1730  CB  MET A 225      18.955  36.151  23.220  1.00 27.66           C
ATOM   1731  CG  MET A 225      17.725  35.238  23.178  1.00 25.82           C
ATOM   1732  SD  MET A 225      16.734  35.411  21.677  1.00 28.36           S
ATOM   1733  CE  MET A 225      16.712  33.766  21.097  1.00 20.74           C
ATOM   1734  N   GLU A 226      18.035  37.945  25.610  1.00 32.14           N
ATOM   1735  CA  GLU A 226      17.129  38.128  26.734  1.00 31.80           C
ATOM   1736  C   GLU A 226      16.734  39.538  27.146  1.00 32.67           C
ATOM   1737  O   GLU A 226      15.859  39.709  27.986  1.00 35.44           O
ATOM   1738  CB  GLU A 226      17.614  37.300  27.914  1.00 28.79           C
ATOM   1739  CG  GLU A 226      17.610  35.827  27.547  1.00 32.66           C
ATOM   1740  CD  GLU A 226      18.076  34.908  28.652  1.00 36.63           C
ATOM   1741  OE1 GLU A 226      18.737  35.372  29.613  1.00 36.97           O
ATOM   1742  OE2 GLU A 226      17.779  33.700  28.537  1.00 35.46           O
ATOM   1743  N   LEU A 227      17.322  40.545  26.510  1.00 33.14           N
ATOM   1744  CA  LEU A 227      16.993  41.939  26.795  1.00 31.94           C
ATOM   1745  C   LEU A 227      15.503  42.196  26.551  1.00 34.79           C
ATOM   1746  O   LEU A 227      14.862  41.515  25.742  1.00 30.62           O
ATOM   1747  CB  LEU A 227      17.776  42.844  25.854  1.00 32.79           C
ATOM   1748  CG  LEU A 227      18.707  43.863  26.467  1.00 36.00           C
ATOM   1749  CD1 LEU A 227      19.637  43.175  27.424  1.00 38.78           C
ATOM   1750  CD2 LEU A 227      19.483  44.509  25.359  1.00 40.04           C
ATOM   1751  N   ALA A 228      14.958  43.190  27.244  1.00 36.01           N
ATOM   1752  CA  ALA A 228      13.553  43.552  27.063  1.00 36.88           C
ATOM   1753  C   ALA A 228      13.429  44.129  25.661  1.00 34.45           C
ATOM   1754  O   ALA A 228      14.269  44.926  25.239  1.00 34.10           O
ATOM   1755  CB  ALA A 228      13.127  44.594  28.092  1.00 32.13           C
ATOM   1756  N   HIS A 229      12.379  43.729  24.955  1.00 32.59           N
ATOM   1757  CA  HIS A 229      12.140  44.195  23.600  1.00 34.80           C
ATOM   1758  C   HIS A 229      12.191  45.707  23.478  1.00 34.01           C
ATOM   1759  O   HIS A 229      12.790  46.213  22.535  1.00 36.47           O
ATOM   1760  CB  HIS A 229      10.801  43.674  23.073  1.00 37.57           C
ATOM   1761  CG  HIS A 229      10.631  43.831  21.594  1.00 40.37           C
ATOM   1762  ND1 HIS A 229       9.480  44.332  21.025  1.00 42.96           N
ATOM   1763  CD2 HIS A 229      11.467  43.550  20.565  1.00 39.86           C
ATOM   1764  CE1 HIS A 229       9.615  44.352  19.710  1.00 42.19           C
ATOM   1765  NE2 HIS A 229      10.812  43.882  19.405  1.00 37.81           N
ATOM   1766  N   GLU A 230      11.615  46.423  24.448  1.00 34.94           N
ATOM   1767  CA  GLU A 230      11.609  47.894  24.419  1.00 37.28           C
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ATOM   1768  C   GLU A 230      13.012  48.447  24.543  1.00 32.93           C
ATOM   1769  O   GLU A 230      13.311  49.497  23.975  1.00 33.81           O
ATOM   1770  CB  GLU A 230      10.763  48.501  25.545  1.00 44.56           C
ATOM   1771  CG  GLU A 230       9.431  47.826  25.789  1.00 60.54           C
ATOM   1772  CD  GLU A 230       9.330  47.232  27.192  1.00 70.73           C
ATOM   1773  OE1 GLU A 230      10.123  47.636  28.083  1.00 72.57           O
ATOM   1774  OE2 GLU A 230       8.450  46.365  27.407  1.00 76.72           O
ATOM   1775  N   VAL A 231      13.850  47.763  25.322  1.00 30.00           N
ATOM   1776  CA  VAL A 231      15.238  48.182  25.526  1.00 29.68           C
ATOM   1777  C   VAL A 231      16.046  47.982  24.240  1.00 30.20           C
ATOM   1778  O   VAL A 231      16.836  48.850  23.843  1.00 29.79           O
ATOM   1779  CB  VAL A 231      15.890  47.404  26.687  1.00 31.29           C
ATOM   1780  CG1 VAL A 231      17.347  47.839  26.882  1.00 26.02           C
ATOM   1781  CG2 VAL A 231      15.094  47.626  27.959  1.00 30.69           C
ATOM   1782  N   TRP A 232      15.818  46.848  23.578  1.00 28.73           N
ATOM   1783  CA  TRP A 232      16.500  46.546  22.328  1.00 27.70           C
ATOM   1784  C   TRP A 232      16.083  47.543  21.237  1.00 28.56           C
ATOM   1785  O   TRP A 232      16.934  48.143  20.585  1.00 27.57           O
ATOM   1786  CB  TRP A 232      16.183  45.117  21.898  1.00 27.84           C
ATOM   1787  CG  TRP A 232      16.859  44.704  20.613  1.00 31.96           C
ATOM   1788  CD1 TRP A 232      18.160  44.313  20.458  1.00 30.23           C
ATOM   1789  CD2 TRP A 232      16.257  44.616  19.309  1.00 31.70           C
ATOM   1790  NE1 TRP A 232      18.403  43.985  19.146  1.00 29.19           N
ATOM   1791  CE2 TRP A 232      17.256  44.162  18.419  1.00 29.11           C
ATOM   1792  CE3 TRP A 232      14.973  44.876  18.808  1.00 30.27           C
ATOM   1793  CZ2 TRP A 232      17.010  43.959  17.060  1.00 24.75           C
ATOM   1794  CZ3 TRP A 232      14.732  44.673  17.462  1.00 28.83           C
ATOM   1795  CH2 TRP A 232      15.747  44.221  16.602  1.00 27.54           C
ATOM   1796  N   LEU A 233      14.776  47.763  21.087  1.00 27.50           N
ATOM   1797  CA  LEU A 233      14.253  48.688  20.078  1.00 28.59           C
ATOM   1798  C   LEU A 233      14.799  50.089  20.262  1.00 28.42           C
ATOM   1799  O   LEU A 233      15.054  50.809  19.295  1.00 31.71           O
ATOM   1800  CB  LEU A 233      12.726  48.754  20.158  1.00 26.64           C
ATOM   1801  CG  LEU A 233      11.944  47.515  19.745  1.00 26.28           C
ATOM   1802  CD1 LEU A 233      10.505  47.664  20.164  1.00 29.05           C
ATOM   1803  CD2 LEU A 233      12.054  47.331  18.249  1.00 25.22           C
ATOM   1804  N   GLU A 234      14.961  50.466  21.522  1.00 31.68           N
ATOM   1805  CA  GLU A 234      15.447  51.780  21.899  1.00 35.52           C
ATOM   1806  C   GLU A 234      16.900  52.002  21.503  1.00 33.76           C
ATOM   1807  O   GLU A 234      17.306  53.134  21.234  1.00 34.15           O
ATOM   1808  CB  GLU A 234      15.287  51.944  23.407  1.00 40.18           C
ATOM   1809  CG  GLU A 234      15.539  53.330  23.940  1.00 50.82           C
ATOM   1810  CD  GLU A 234      15.717  53.311  25.452  1.00 62.88           C
ATOM   1811  OE1 GLU A 234      14.827  52.766  26.156  1.00 65.09           O
ATOM   1812  OE2 GLU A 234      16.765  53.810  25.935  1.00 68.71           O
ATOM   1813  N   ASN A 235      17.670  50.916  21.436  1.00 34.84           N
ATOM   1814  CA  ASN A 235      19.089  51.000  21.087  1.00 34.45           C
ATOM   1815  C   ASN A 235      19.487  50.528  19.706  1.00 33.94           C
ATOM   1816  O   ASN A 235      20.672  50.330  19.447  1.00 35.53           O
ATOM   1817  CB  ASN A 235      19.934  50.278  22.128  1.00 38.51           C
ATOM   1818  CG  ASN A 235      19.975  51.021  23.437  1.00 41.10           C
ATOM   1819  OD1 ASN A 235      19.164  50.769  24.330  1.00 44.29           O
ATOM   1820  ND2 ASN A 235      20.887  51.984  23.541  1.00 41.78           N
ATOM   1821  N   THR A 236      18.506  50.323  18.834  1.00 29.80           N
ATOM   1822  CA  THR A 236      18.765  49.891  17.469  1.00 28.52           C
ATOM   1823  C   THR A 236      17.745  50.594  16.576  1.00 30.74           C
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ATOM   1824  O   THR A 236      16.893  51.344  17.065  1.00 31.15           O
ATOM   1825  CB  THR A 236      18.561  48.359  17.301  1.00 25.96           C
ATOM   1826  OG1 THR A 236      17.201  48.036  17.583  1.00 22.84           O
ATOM   1827  CG2 THR A 236      19.462  47.551  18.234  1.00 21.46           C
ATOM   1828  N   GLN A 237      17.859  50.370  15.267  1.00 31.41           N
ATOM   1829  CA  GLN A 237      16.922  50.913  14.278  1.00 30.74           C
ATOM   1830  C   GLN A 237      16.391  49.705  13.511  1.00 30.13           C
ATOM   1831  O   GLN A 237      17.093  48.709  13.367  1.00 30.83           O
ATOM   1832  CB  GLN A 237      17.614  51.871  13.321  1.00 30.71           C
ATOM   1833  CG  GLN A 237      17.958  53.190  13.936  1.00 39.09           C
ATOM   1834  CD  GLN A 237      19.374  53.590  13.620  1.00 49.12           C
ATOM   1835  OE1 GLN A 237      20.313  53.160  14.296  1.00 56.24           O
ATOM   1836  NE2 GLN A 237      19.551  54.384  12.564  1.00 52.48           N
ATOM   1837  N   PRO A 238      15.148  49.777  13.008  1.00 28.75           N
ATOM   1838  CA  PRO A 238      14.546  48.668  12.267  1.00 26.59           C
ATOM   1839  C   PRO A 238      15.370  48.183  11.080  1.00 26.19           C
ATOM   1840  O   PRO A 238      15.372  46.990  10.770  1.00 26.84           O
ATOM   1841  CB  PRO A 238      13.203  49.250  11.822  1.00 28.43           C
ATOM   1842  CG  PRO A 238      12.880  50.225  12.891  1.00 26.13           C
ATOM   1843  CD  PRO A 238      14.208  50.909  13.083  1.00 30.19           C
ATOM   1844  N   MET A 239      16.059  49.100  10.414  1.00 20.47           N
ATOM   1845  CA  MET A 239      16.863  48.714   9.279  1.00 20.57           C
ATOM   1846  C   MET A 239      18.370  48.791   9.530  1.00 20.29           C
ATOM   1847  O   MET A 239      19.161  48.774   8.602  1.00 22.25           O
ATOM   1848  CB  MET A 239      16.430  49.494   8.040  1.00 18.56           C
ATOM   1849  CG  MET A 239      15.032  49.109   7.565  1.00 20.01           C
ATOM   1850  SD  MET A 239      14.434  50.039   6.130  1.00 23.58           S
ATOM   1851  CE  MET A 239      15.155  49.108   4.748  1.00 20.88           C
ATOM   1852  N   LEU A 240      18.755  48.861  10.797  1.00 17.81           N
ATOM   1853  CA  LEU A 240      20.157  48.871  11.213  1.00 16.99           C
ATOM   1854  C   LEU A 240      20.081  48.303  12.630  1.00 19.58           C
ATOM   1855  O   LEU A 240      20.384  48.969  13.625  1.00 19.66           O
ATOM   1856  CB  LEU A 240      20.736  50.284  11.207  1.00 18.37           C
ATOM   1857  CG  LEU A 240      22.272  50.286  11.228  1.00 19.59           C
ATOM   1858  CD1 LEU A 240      22.795  49.756   9.918  1.00 21.67           C
ATOM   1859  CD2 LEU A 240      22.810  51.674  11.462  1.00 24.51           C
ATOM   1860  N   SER A 241      19.670  47.043  12.686  1.00 18.47           N
ATOM   1861  CA  SER A 241      19.421  46.344  13.930  1.00 20.76           C
ATOM   1862  C   SER A 241      20.501  45.459  14.553  1.00 23.25           C
ATOM   1863  O   SER A 241      20.340  45.004  15.693  1.00 21.32           O
ATOM   1864  CB  SER A 241      18.164  45.494  13.736  1.00 20.60           C
ATOM   1865  OG  SER A 241      18.386  44.468  12.772  1.00 21.31           O
ATOM   1866  N   HIS A 242      21.564  45.161  13.812  1.00 19.80           N
ATOM   1867  CA  HIS A 242      22.591  44.286  14.347  1.00 19.16           C
ATOM   1868  C   HIS A 242      23.398  44.947  15.450  1.00 22.17           C
ATOM   1869  O   HIS A 242      23.443  46.173  15.560  1.00 20.03           O
ATOM   1870  CB  HIS A 242      23.501  43.774  13.224  1.00 18.24           C
ATOM   1871  CG  HIS A 242      24.091  44.858  12.377  1.00 20.43           C
ATOM   1872  ND1 HIS A 242      25.432  45.187  12.409  1.00 22.52           N
ATOM   1873  CD2 HIS A 242      23.526  45.682  11.463  1.00 18.71           C
ATOM   1874  CE1 HIS A 242      25.665  46.163  11.548  1.00 18.89           C
ATOM   1875  NE2 HIS A 242      24.525  46.482  10.962  1.00 23.47           N
ATOM   1876  N   ILE A 243      23.995  44.125  16.303  1.00 24.37           N
ATOM   1877  CA  ILE A 243      24.816  44.629  17.392  1.00 25.31           C
ATOM   1878  C   ILE A 243      26.201  43.985  17.372  1.00 24.25           C
ATOM   1879  O   ILE A 243      26.327  42.759  17.359  1.00 22.73           O
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ATOM   1880  CB  ILE A 243      24.128  44.402  18.766  1.00 25.45           C
ATOM   1881  CG1 ILE A 243      22.922  45.332  18.895  1.00 27.28           C
ATOM   1882  CG2 ILE A 243      25.087  44.686  19.915  1.00 21.47           C
ATOM   1883  CD1 ILE A 243      21.950  44.901  19.957  1.00 29.04           C
ATOM   1884  N   ASN A 244      27.225  44.832  17.281  1.00 23.62           N
ATOM   1885  CA  ASN A 244      28.623  44.396  17.287  1.00 23.67           C
ATOM   1886  C   ASN A 244      28.941  43.811  18.657  1.00 24.52           C
ATOM   1887  O   ASN A 244      28.549  44.376  19.691  1.00 24.28           O
ATOM   1888  CB  ASN A 244      29.574  45.581  17.052  1.00 17.15           C
ATOM   1889  CG  ASN A 244      29.611  46.043  15.604  1.00 19.40           C
ATOM   1890  OD1 ASN A 244      29.238  45.309  14.676  1.00 18.45           O
ATOM   1891  ND2 ASN A 244      30.083  47.265  15.400  1.00 15.73           N
ATOM   1892  N   VAL A 245      29.639  42.682  18.663  1.00 23.31           N
ATOM   1893  CA  VAL A 245      30.038  42.040  19.908  1.00 24.32           C
ATOM   1894  C   VAL A 245      31.557  41.882  19.869  1.00 24.24           C
ATOM   1895  O   VAL A 245      32.101  41.287  18.941  1.00 22.79           O
ATOM   1896  CB  VAL A 245      29.362  40.651  20.093  1.00 26.99           C
ATOM   1897  CG1 VAL A 245      29.771  40.038  21.427  1.00 25.06           C
ATOM   1898  CG2 VAL A 245      27.855  40.791  20.048  1.00 27.37           C
ATOM   1899  N   GLY A 246      32.233  42.471  20.850  1.00 26.08           N
ATOM   1900  CA  GLY A 246      33.682  42.385  20.922  1.00 27.64           C
ATOM   1901  C   GLY A 246      34.239  43.023  22.178  1.00 28.69           C
ATOM   1902  O   GLY A 246      33.501  43.304  23.124  1.00 29.20           O
ATOM   1903  N   THR A 247      35.547  43.257  22.190  1.00 29.54           N
ATOM   1904  CA  THR A 247      36.208  43.872  23.341  1.00 30.35           C
ATOM   1905  C   THR A 247      36.459  45.365  23.127  1.00 28.76           C
ATOM   1906  O   THR A 247      36.526  46.138  24.079  1.00 30.81           O
ATOM   1907  CB  THR A 247      37.568  43.204  23.638  1.00 28.68           C
ATOM   1908  OG1 THR A 247      38.439  43.388  22.518  1.00 31.19           O
ATOM   1909  CG2 THR A 247      37.398  41.724  23.907  1.00 24.53           C
ATOM   1910  N   GLY A 248      36.585  45.766  21.870  1.00 31.37           N
ATOM   1911  CA  GLY A 248      36.854  47.158  21.562  1.00 32.00           C
ATOM   1912  C   GLY A 248      38.322  47.471  21.787  1.00 33.41           C
ATOM   1913  O   GLY A 248      38.764  48.605  21.597  1.00 34.23           O
ATOM   1914  N   VAL A 249      39.074  46.454  22.213  1.00 38.41           N
ATOM   1915  CA  VAL A 249      40.512  46.565  22.485  1.00 37.20           C
ATOM   1916  C   VAL A 249      41.301  45.894  21.363  1.00 35.66           C
ATOM   1917  O   VAL A 249      40.978  44.784  20.942  1.00 35.90           O
ATOM   1918  CB  VAL A 249      40.888  45.873  23.825  1.00 34.53           C
ATOM   1919  CG1 VAL A 249      42.387  45.894  24.038  1.00 37.08           C
ATOM   1920  CG2 VAL A 249      40.196  46.562  24.980  1.00 36.29           C
ATOM   1921  N   ASP A 250      42.304  46.582  20.842  1.00 33.85           N
ATOM   1922  CA  ASP A 250      43.109  45.977  19.801  1.00 33.95           C
ATOM   1923  C   ASP A 250      44.546  45.754  20.270  1.00 32.74           C
ATOM   1924  O   ASP A 250      44.983  46.322  21.275  1.00 31.73           O
ATOM   1925  CB  ASP A 250      43.049  46.785  18.490  1.00 37.06           C
ATOM   1926  CG  ASP A 250      43.391  48.258  18.666  1.00 38.50           C
ATOM   1927  OD1 ASP A 250      43.705  48.698  19.794  1.00 46.13           O
ATOM   1928  OD2 ASP A 250      43.339  48.987  17.654  1.00 35.15           O
ATOM   1929  N   CYS A 251      45.226  44.827  19.608  1.00 29.57           N
ATOM   1930  CA  CYS A 251      46.614  44.526  19.909  1.00 28.29           C
ATOM   1931  C   CYS A 251      47.276  44.078  18.614  1.00 26.06           C
ATOM   1932  O   CYS A 251      46.614  43.561  17.709  1.00 25.31           O
ATOM   1933  CB  CYS A 251      46.738  43.456  21.007  1.00 32.33           C
ATOM   1934  SG  CYS A 251      46.490  41.735  20.508  1.00 31.70           S
ATOM   1935  N   THR A 252      48.574  44.345  18.509  1.00 23.97           N
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ATOM   1936  CA  THR A 252      49.361  43.995  17.333  1.00 19.42           C
ATOM   1937  C   THR A 252      49.551  42.488  17.207  1.00 17.80           C
ATOM   1938  O   THR A 252      49.436  41.745  18.183  1.00 19.62           O
ATOM   1939  CB  THR A 252      50.757  44.668  17.392  1.00 16.72           C
ATOM   1940  OG1 THR A 252      51.465  44.196  18.541  1.00 17.38           O
ATOM   1941  CG2 THR A 252      50.623  46.174  17.503  1.00 11.92           C
ATOM   1942  N   ILE A 253      49.823  42.033  15.995  1.00 18.68           N
ATOM   1943  CA  ILE A 253      50.064  40.615  15.777  1.00 17.94           C
ATOM   1944  C   ILE A 253      51.326  40.224  16.571  1.00 20.38           C
ATOM   1945  O   ILE A 253      51.435  39.108  17.086  1.00 22.58           O
ATOM   1946  CB  ILE A 253      50.255  40.311  14.278  1.00 18.64           C
ATOM   1947  CG1 ILE A 253      49.001  40.723  13.511  1.00 19.01           C
ATOM   1948  CG2 ILE A 253      50.547  38.834  14.069  1.00 17.02           C
ATOM   1949  CD1 ILE A 253      47.732  40.139  14.093  1.00 20.88           C
ATOM   1950  N   ARG A 254      52.255  41.168  16.695  1.00 17.10           N
ATOM   1951  CA  ARG A 254      53.486  40.948  17.437  1.00 19.00           C
ATOM   1952  C   ARG A 254      53.152  40.665  18.907  1.00 18.21           C
ATOM   1953  O   ARG A 254      53.643  39.692  19.492  1.00 17.16           O
ATOM   1954  CB  ARG A 254      54.398  42.174  17.267  1.00 18.61           C
ATOM   1955  CG  ARG A 254      55.315  42.512  18.431  1.00 23.39           C
ATOM   1956  CD  ARG A 254      56.721  42.006  18.256  1.00 27.73           C
ATOM   1957  NE  ARG A 254      57.339  42.443  17.005  1.00 29.36           N
ATOM   1958  CZ  ARG A 254      58.490  41.957  16.542  1.00 26.45           C
ATOM   1959  NH1 ARG A 254      59.154  41.048  17.241  1.00 26.79           N
ATOM   1960  NH2 ARG A 254      58.910  42.272  15.326  1.00 28.02           N
ATOM   1961  N   GLU A 255      52.275  41.475  19.492  1.00 18.27           N
ATOM   1962  CA  GLU A 255      51.899  41.257  20.882  1.00 19.30           C
ATOM   1963  C   GLU A 255      51.194  39.916  21.058  1.00 21.18           C
ATOM   1964  O   GLU A 255      51.396  39.228  22.067  1.00 20.61           O
ATOM   1965  CB  GLU A 255      50.991  42.369  21.392  1.00 21.70           C
ATOM   1966  CG  GLU A 255      50.515  42.109  22.818  1.00 28.09           C
ATOM   1967  CD  GLU A 255      49.820  43.294  23.471  1.00 36.88           C
ATOM   1968  OE1 GLU A 255      49.637  44.351  22.823  1.00 38.45           O
ATOM   1969  OE2 GLU A 255      49.453  43.160  24.658  1.00 42.60           O
ATOM   1970  N   LEU A 256      50.344  39.571  20.087  1.00 20.20           N
ATOM   1971  CA  LEU A 256      49.599  38.312  20.100  1.00 19.03           C
ATOM   1972  C   LEU A 256      50.553  37.121  20.038  1.00 17.72           C
ATOM   1973  O   LEU A 256      50.474  36.218  20.865  1.00 19.90           O
ATOM   1974  CB  LEU A 256      48.614  38.248  18.927  1.00 16.37           C
ATOM   1975  CG  LEU A 256      47.895  36.901  18.779  1.00 21.11           C
ATOM   1976  CD1 LEU A 256      46.864  36.730  19.892  1.00 19.36           C
ATOM   1977  CD2 LEU A 256      47.242  36.778  17.406  1.00 20.15           C
ATOM   1978  N   ALA A 257      51.462  37.136  19.066  1.00 17.50           N
ATOM   1979  CA  ALA A 257      52.442  36.064  18.891  1.00 17.33           C
ATOM   1980  C   ALA A 257      53.315  35.865  20.132  1.00 16.59           C
ATOM   1981  O   ALA A 257      53.545  34.746  20.586  1.00 20.02           O
ATOM   1982  CB  ALA A 257      53.320  36.375  17.678  1.00 18.06           C
ATOM   1983  N   GLN A 258      53.800  36.977  20.661  1.00 17.38           N
ATOM   1984  CA  GLN A 258      54.646  37.015  21.839  1.00 16.83           C
ATOM   1985  C   GLN A 258      53.905  36.466  23.068  1.00 18.93           C
ATOM   1986  O   GLN A 258      54.493  35.764  23.899  1.00 17.89           O
ATOM   1987  CB  GLN A 258      55.060  38.466  22.056  1.00 22.46           C
ATOM   1988  CG  GLN A 258      56.540  38.739  22.150  1.00 29.80           C
ATOM   1989  CD  GLN A 258      57.390  38.112  21.051  1.00 25.80           C
ATOM   1990  OE1 GLN A 258      57.533  38.651  19.947  1.00 26.47           O
ATOM   1991  NE2 GLN A 258      58.037  37.012  21.390  1.00 25.20           N
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ATOM   1992  N   THR A 259      52.609  36.767  23.180  1.00 19.29           N
ATOM   1993  CA  THR A 259      51.810  36.276  24.312  1.00 18.02           C
ATOM   1994  C   THR A 259      51.563  34.776  24.169  1.00 19.45           C
ATOM   1995  O   THR A 259      51.644  34.044  25.140  1.00 24.61           O
ATOM   1996  CB  THR A 259      50.469  37.023  24.451  1.00 18.75           C
ATOM   1997  OG1 THR A 259      50.720  38.429  24.586  1.00 21.42           O
ATOM   1998  CG2 THR A 259      49.695  36.528  25.676  1.00 14.05           C
ATOM   1999  N   ILE A 260      51.277  34.315  22.956  1.00 19.74           N
ATOM   2000  CA  ILE A 260      51.076  32.891  22.722  1.00 19.52           C
ATOM   2001  C   ILE A 260      52.367  32.138  23.068  1.00 20.21           C
ATOM   2002  O   ILE A 260      52.316  31.120  23.756  1.00 23.47           O
ATOM   2003  CB  ILE A 260      50.650  32.608  21.258  1.00 19.37           C
ATOM   2004  CG1 ILE A 260      49.229  33.143  21.030  1.00 20.82           C
ATOM   2005  CG2 ILE A 260      50.738  31.109  20.943  1.00 17.60           C
ATOM   2006  CD1 ILE A 260      48.668  32.912  19.616  1.00 18.62           C
ATOM   2007  N   ALA A 261      53.516  32.657  22.632  1.00 18.83           N
ATOM   2008  CA  ALA A 261      54.809  32.031  22.929  1.00 16.59           C
ATOM   2009  C   ALA A 261      54.970  31.822  24.436  1.00 18.33           C
ATOM   2010  O   ALA A 261      55.381  30.751  24.888  1.00 20.22           O
ATOM   2011  CB  ALA A 261      55.950  32.891  22.398  1.00 14.07           C
ATOM   2012  N   LYS A 262      54.644  32.853  25.210  1.00 18.66           N
ATOM   2013  CA  LYS A 262      54.733  32.791  26.667  1.00 18.10           C
ATOM   2014  C   LYS A 262      53.785  31.741  27.270  1.00 21.96           C
ATOM   2015  O   LYS A 262      54.197  30.944  28.104  1.00 23.65           O
ATOM   2016  CB  LYS A 262      54.427  34.163  27.263  1.00 19.69           C
ATOM   2017  CG  LYS A 262      54.290  34.176  28.775  1.00 26.08           C
ATOM   2018  CD  LYS A 262      53.666  35.484  29.208  1.00 39.95           C
ATOM   2019  CE  LYS A 262      53.326  35.523  30.694  1.00 45.02           C
ATOM   2020  NZ  LYS A 262      52.690  36.849  31.027  1.00 50.41           N
ATOM   2021  N   VAL A 263      52.515  31.774  26.863  1.00 21.38           N
ATOM   2022  CA  VAL A 263      51.480  30.849  27.327  1.00 20.98           C
ATOM   2023  C   VAL A 263      51.864  29.376  27.088  1.00 22.45           C
ATOM   2024  O   VAL A 263      51.583  28.496  27.898  1.00 22.61           O
ATOM   2025  CB  VAL A 263      50.120  31.158  26.607  1.00 19.85           C
ATOM   2026  CG1 VAL A 263      49.153  29.999  26.746  1.00 20.42           C
ATOM   2027  CG2 VAL A 263      49.494  32.422  27.175  1.00 16.77           C
ATOM   2028  N   VAL A 264      52.495  29.116  25.958  1.00 21.97           N
ATOM   2029  CA  VAL A 264      52.896  27.771  25.591  1.00 23.55           C
ATOM   2030  C   VAL A 264      54.234  27.337  26.217  1.00 24.01           C
ATOM   2031  O   VAL A 264      54.530  26.151  26.294  1.00 25.93           O
ATOM   2032  CB  VAL A 264      52.908  27.662  24.044  1.00 24.27           C
ATOM   2033  CG1 VAL A 264      53.620  26.418  23.576  1.00 28.94           C
ATOM   2034  CG2 VAL A 264      51.459  27.681  23.531  1.00 24.80           C
ATOM   2035  N   GLY A 265      55.010  28.295  26.712  1.00 22.94           N
ATOM   2036  CA  GLY A 265      56.292  27.973  27.304  1.00 23.63           C
ATOM   2037  C   GLY A 265      57.414  27.866  26.282  1.00 26.39           C
ATOM   2038  O   GLY A 265      58.411  27.174  26.522  1.00 27.09           O
ATOM   2039  N   TYR A 266      57.248  28.534  25.137  1.00 26.29           N
ATOM   2040  CA  TYR A 266      58.254  28.526  24.069  1.00 24.31           C
ATOM   2041  C   TYR A 266      59.442  29.408  24.455  1.00 24.08           C
ATOM   2042  O   TYR A 266      59.255  30.568  24.832  1.00 22.89           O
ATOM   2043  CB  TYR A 266      57.647  29.022  22.750  1.00 20.17           C
ATOM   2044  CG  TYR A 266      58.620  29.006  21.588  1.00 19.46           C
ATOM   2045  CD1 TYR A 266      59.247  27.820  21.200  1.00 20.34           C
ATOM   2046  CD2 TYR A 266      58.917  30.176  20.875  1.00 18.59           C
ATOM   2047  CE1 TYR A 266      60.146  27.795  20.129  1.00 20.88           C
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ATOM   2048  CE2 TYR A 266      59.815  30.162  19.801  1.00 16.16           C
ATOM   2049  CZ  TYR A 266      60.424  28.967  19.438  1.00 21.44           C
ATOM   2050  OH  TYR A 266      61.317  28.934  18.394  1.00 22.49           O
ATOM   2051  N   LYS A 267      60.654  28.862  24.347  1.00 24.05           N
ATOM   2052  CA  LYS A 267      61.864  29.600  24.703  1.00 26.76           C
ATOM   2053  C   LYS A 267      62.659  30.095  23.505  1.00 26.93           C
ATOM   2054  O   LYS A 267      63.651  30.796  23.673  1.00 30.97           O
ATOM   2055  CB  LYS A 267      62.795  28.745  25.559  1.00 27.82           C
ATOM   2056  CG  LYS A 267      62.216  28.257  26.845  1.00 28.67           C
ATOM   2057  CD  LYS A 267      61.967  29.364  27.789  1.00 26.68           C
ATOM   2058  CE  LYS A 267      61.719  28.779  29.150  1.00 29.93           C
ATOM   2059  NZ  LYS A 267      61.372  29.867  30.081  1.00 39.28           N
ATOM   2060  N   GLY A 268      62.258  29.699  22.305  1.00 26.09           N
ATOM   2061  CA  GLY A 268      62.964  30.135  21.118  1.00 22.82           C
ATOM   2062  C   GLY A 268      62.673  31.583  20.769  1.00 25.18           C
ATOM   2063  O   GLY A 268      62.155  32.347  21.585  1.00 24.76           O
ATOM   2064  N   ARG A 269      63.013  31.966  19.548  1.00 24.89           N
ATOM   2065  CA  ARG A 269      62.784  33.322  19.102  1.00 26.95           C
ATOM   2066  C   ARG A 269      61.600  33.456  18.164  1.00 24.06           C
ATOM   2067  O   ARG A 269      61.352  32.581  17.353  1.00 22.61           O
ATOM   2068  CB  ARG A 269      64.043  33.872  18.436  1.00 29.15           C
ATOM   2069  CG  ARG A 269      65.043  34.430  19.436  1.00 38.17           C
ATOM   2070  CD  ARG A 269      65.853  35.575  18.828  1.00 49.26           C
ATOM   2071  NE  ARG A 269      65.021  36.554  18.107  1.00 55.55           N
ATOM   2072  CZ  ARG A 269      64.206  37.449  18.675  1.00 57.47           C
ATOM   2073  NH1 ARG A 269      64.103  37.546  20.004  1.00 53.63           N
ATOM   2074  NH2 ARG A 269      63.504  38.274  17.903  1.00 52.98           N
ATOM   2075  N   VAL A 270      60.834  34.530  18.334  1.00 23.44           N
ATOM   2076  CA  VAL A 270      59.694  34.816  17.472  1.00 23.46           C
ATOM   2077  C   VAL A 270      60.233  35.800  16.445  1.00 22.75           C
ATOM   2078  O   VAL A 270      60.720  36.864  16.792  1.00 23.50           O
ATOM   2079  CB  VAL A 270      58.517  35.467  18.252  1.00 26.93           C
ATOM   2080  CG1 VAL A 270      57.384  35.869  17.280  1.00 22.54           C
ATOM   2081  CG2 VAL A 270      57.991  34.495  19.310  1.00 20.39           C
ATOM   2082  N   VAL A 271      60.185  35.428  15.177  1.00 23.67           N
ATOM   2083  CA  VAL A 271      60.705  36.296  14.136  1.00 22.22           C
ATOM   2084  C   VAL A 271      59.633  36.698  13.125  1.00 24.45           C
ATOM   2085  O   VAL A 271      58.863  35.865  12.649  1.00 25.71           O
ATOM   2086  CB  VAL A 271      61.893  35.605  13.394  1.00 23.27           C
ATOM   2087  CG1 VAL A 271      62.493  36.535  12.349  1.00 21.83           C
ATOM   2088  CG2 VAL A 271      62.962  35.163  14.393  1.00 15.36           C
ATOM   2089  N   PHE A 272      59.559  37.991  12.833  1.00 24.78           N
ATOM   2090  CA  PHE A 272      58.611  38.490  11.848  1.00 22.52           C
ATOM   2091  C   PHE A 272      59.351  38.807  10.570  1.00 23.89           C
ATOM   2092  O   PHE A 272      60.315  39.572  10.580  1.00 25.77           O
ATOM   2093  CB  PHE A 272      57.873  39.721  12.368  1.00 18.39           C
ATOM   2094  CG  PHE A 272      56.724  39.376  13.249  1.00 19.75           C
ATOM   2095  CD1 PHE A 272      56.914  39.165  14.607  1.00 16.48           C
ATOM   2096  CD2 PHE A 272      55.456  39.189  12.708  1.00 20.76           C
ATOM   2097  CE1 PHE A 272      55.864  38.770  15.417  1.00 17.15           C
ATOM   2098  CE2 PHE A 272      54.394  38.794  13.512  1.00 21.53           C
ATOM   2099  CZ  PHE A 272      54.604  38.583  14.875  1.00 21.31           C
ATOM   2100  N   ASP A 273      58.941  38.154   9.488  1.00 20.68           N
ATOM   2101  CA  ASP A 273      59.545  38.359   8.186  1.00 20.31           C
ATOM   2102  C   ASP A 273      58.807  39.509   7.499  1.00 21.80           C
ATOM   2103  O   ASP A 273      57.726  39.316   6.931  1.00 21.93           O
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ATOM   2104  CB  ASP A 273      59.439  37.078   7.365  1.00 21.56           C
ATOM   2105  CG  ASP A 273      60.167  37.168   6.040  1.00 23.22           C
ATOM   2106  OD1 ASP A 273      60.515  38.281   5.594  1.00 24.71           O
ATOM   2107  OD2 ASP A 273      60.388  36.108   5.431  1.00 29.71           O
ATOM   2108  N   ALA A 274      59.403  40.701   7.552  1.00 23.70           N
ATOM   2109  CA  ALA A 274      58.812  41.913   6.971  1.00 23.41           C
ATOM   2110  C   ALA A 274      58.874  41.983   5.461  1.00 22.81           C
ATOM   2111  O   ALA A 274      58.460  42.973   4.882  1.00 25.72           O
ATOM   2112  CB  ALA A 274      59.441  43.176   7.579  1.00 20.97           C
ATOM   2113  N   SER A 275      59.449  40.974   4.818  1.00 24.06           N
ATOM   2114  CA  SER A 275      59.490  40.982   3.364  1.00 25.84           C
ATOM   2115  C   SER A 275      58.134  40.486   2.823  1.00 26.17           C
ATOM   2116  O   SER A 275      57.930  40.443   1.618  1.00 30.03           O
ATOM   2117  CB  SER A 275      60.626  40.109   2.840  1.00 25.34           C
ATOM   2118  OG  SER A 275      60.309  38.736   2.975  1.00 23.92           O
ATOM   2119  N   LYS A 276      57.242  40.064   3.722  1.00 23.44           N
ATOM   2120  CA  LYS A 276      55.911  39.601   3.355  1.00 21.55           C
ATOM   2121  C   LYS A 276      54.966  40.738   3.704  1.00 23.51           C
ATOM   2122  O   LYS A 276      55.168  41.426   4.697  1.00 21.94           O
ATOM   2123  CB  LYS A 276      55.525  38.366   4.152  1.00 18.43           C
ATOM   2124  CG  LYS A 276      56.465  37.217   3.949  1.00 23.40           C
ATOM   2125  CD  LYS A 276      56.376  36.686   2.563  1.00 19.46           C
ATOM   2126  CE  LYS A 276      57.293  35.503   2.404  1.00 19.32           C
ATOM   2127  NZ  LYS A 276      57.091  34.884   1.073  1.00 20.57           N
ATOM   2128  N   PRO A 277      53.901  40.927   2.905  1.00 25.83           N
ATOM   2129  CA  PRO A 277      52.913  41.989   3.111  1.00 23.21           C
ATOM   2130  C   PRO A 277      51.993  41.791   4.306  1.00 25.16           C
ATOM   2131  O   PRO A 277      51.755  40.669   4.755  1.00 27.63           O
ATOM   2132  CB  PRO A 277      52.122  41.956   1.814  1.00 24.36           C
ATOM   2133  CG  PRO A 277      52.099  40.482   1.495  1.00 27.14           C
ATOM   2134  CD  PRO A 277      53.537  40.088   1.744  1.00 25.99           C
ATOM   2135  N   ASP A 278      51.526  42.904   4.855  1.00 24.80           N
ATOM   2136  CA  ASP A 278      50.595  42.877   5.975  1.00 27.24           C
ATOM   2137  C   ASP A 278      49.214  43.061   5.372  1.00 28.04           C
ATOM   2138  O   ASP A 278      49.090  43.374   4.192  1.00 30.83           O
ATOM   2139  CB  ASP A 278      50.842  44.055   6.926  1.00 24.65           C
ATOM   2140  CG  ASP A 278      52.163  43.971   7.648  1.00 27.25           C
ATOM   2141  OD1 ASP A 278      52.517  42.890   8.146  1.00 25.95           O
ATOM   2142  OD2 ASP A 278      52.834  45.015   7.746  1.00 31.23           O
ATOM   2143  N   GLY A 279      48.178  42.853   6.180  1.00 33.71           N
ATOM   2144  CA  GLY A 279      46.813  43.074   5.720  1.00 35.29           C
ATOM   2145  C   GLY A 279      46.500  44.521   6.075  1.00 34.83           C
ATOM   2146  O   GLY A 279      47.421  45.345   6.143  1.00 36.12           O
ATOM   2147  N   THR A 280      45.232  44.849   6.318  1.00 35.58           N
ATOM   2148  CA  THR A 280      44.885  46.221   6.693  1.00 33.58           C
ATOM   2149  C   THR A 280      45.582  46.496   8.024  1.00 31.16           C
ATOM   2150  O   THR A 280      45.774  45.589   8.833  1.00 32.25           O
ATOM   2151  CB  THR A 280      43.360  46.416   6.841  1.00 35.02           C
ATOM   2152  OG1 THR A 280      42.837  45.434   7.741  1.00 37.94           O
ATOM   2153  CG2 THR A 280      42.666  46.278   5.485  1.00 40.68           C
ATOM   2154  N   PRO A 281      45.988  47.745   8.255  1.00 30.29           N
ATOM   2155  CA  PRO A 281      46.680  48.155   9.481  1.00 31.11           C
ATOM   2156  C   PRO A 281      45.918  47.938  10.779  1.00 31.05           C
ATOM   2157  O   PRO A 281      46.501  47.599  11.811  1.00 29.83           O
ATOM   2158  CB  PRO A 281      46.909  49.651   9.256  1.00 30.84           C
ATOM   2159  CG  PRO A 281      46.961  49.774   7.771  1.00 34.01           C
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ATOM   2160  CD  PRO A 281      45.829  48.888   7.344  1.00 28.72           C
ATOM   2161  N   ARG A 282      44.606  48.083  10.718  1.00 30.96           N
ATOM   2162  CA  ARG A 282      43.818  47.979  11.926  1.00 32.35           C
ATOM   2163  C   ARG A 282      42.416  47.519  11.627  1.00 31.51           C
ATOM   2164  O   ARG A 282      41.810  47.901  10.628  1.00 31.57           O
ATOM   2165  CB  ARG A 282      43.782  49.357  12.590  1.00 31.46           C
ATOM   2166  CG  ARG A 282      43.200  49.409  13.961  1.00 32.99           C
ATOM   2167  CD  ARG A 282      43.436  50.801  14.500  1.00 36.29           C
ATOM   2168  NE  ARG A 282      42.986  50.924  15.885  1.00 41.71           N
ATOM   2169  CZ  ARG A 282      42.170  51.883  16.320  1.00 45.63           C
ATOM   2170  NH1 ARG A 282      41.718  52.814  15.484  1.00 47.45           N
ATOM   2171  NH2 ARG A 282      41.760  51.873  17.589  1.00 43.84           N
ATOM   2172  N   LYS A 283      41.867  46.753  12.550  1.00 32.60           N
ATOM   2173  CA  LYS A 283      40.542  46.244  12.352  1.00 30.39           C
ATOM   2174  C   LYS A 283      39.945  45.838  13.675  1.00 28.42           C
ATOM   2175  O   LYS A 283      40.431  44.923  14.333  1.00 29.84           O
ATOM   2176  CB  LYS A 283      40.640  45.067  11.413  1.00 31.50           C
ATOM   2177  CG  LYS A 283      39.354  44.561  10.894  1.00 44.32           C
ATOM   2178  CD  LYS A 283      39.675  43.355  10.029  1.00 58.01           C
ATOM   2179  CE  LYS A 283      38.476  42.395   9.876  1.00 69.55           C
ATOM   2180  NZ  LYS A 283      38.835  41.067   9.205  1.00 76.75           N
ATOM   2181  N   LEU A 284      38.973  46.619  14.123  1.00 26.11           N
ATOM   2182  CA  LEU A 284      38.271  46.327  15.371  1.00 26.63           C
ATOM   2183  C   LEU A 284      36.877  46.929  15.326  1.00 23.27           C
ATOM   2184  O   LEU A 284      36.611  47.850  14.555  1.00 22.69           O
ATOM   2185  CB  LEU A 284      39.031  46.848  16.599  1.00 28.04           C
ATOM   2186  CG  LEU A 284      38.896  48.324  16.973  1.00 30.81           C
ATOM   2187  CD1 LEU A 284      39.409  48.533  18.380  1.00 26.46           C
ATOM   2188  CD2 LEU A 284      39.666  49.186  15.984  1.00 31.85           C
ATOM   2189  N   LEU A 285      35.987  46.395  16.151  1.00 23.65           N
ATOM   2190  CA  LEU A 285      34.611  46.857  16.205  1.00 23.79           C
ATOM   2191  C   LEU A 285      34.374  47.945  17.235  1.00 25.01           C
ATOM   2192  O   LEU A 285      35.070  48.018  18.245  1.00 27.33           O
ATOM   2193  CB  LEU A 285      33.686  45.687  16.550  1.00 17.98           C
ATOM   2194  CG  LEU A 285      33.682  44.446  15.673  1.00 16.31           C
ATOM   2195  CD1 LEU A 285      32.655  43.482  16.252  1.00 16.67           C
ATOM   2196  CD2 LEU A 285      33.348  44.815  14.236  1.00 16.61           C
ATOM   2197  N   ASP A 286      33.397  48.798  16.947  1.00 25.72           N
ATOM   2198  CA  ASP A 286      32.976  49.849  17.859  1.00 26.84           C
ATOM   2199  C   ASP A 286      31.882  49.118  18.644  1.00 27.52           C
ATOM   2200  O   ASP A 286      30.873  48.718  18.073  1.00 28.15           O
ATOM   2201  CB  ASP A 286      32.374  51.015  17.065  1.00 29.93           C
ATOM   2202  CG  ASP A 286      32.042  52.231  17.937  1.00 32.06           C
ATOM   2203  OD1 ASP A 286      31.615  52.055  19.099  1.00 29.01           O
ATOM   2204  OD2 ASP A 286      32.195  53.372  17.448  1.00 34.96           O
ATOM   2205  N   VAL A 287      32.104  48.886  19.931  1.00 26.55           N
ATOM   2206  CA  VAL A 287      31.124  48.176  20.741  1.00 25.97           C
ATOM   2207  C   VAL A 287      30.294  49.071  21.664  1.00 29.50           C
ATOM   2208  O   VAL A 287      29.724  48.600  22.656  1.00 28.86           O
ATOM   2209  CB  VAL A 287      31.793  47.040  21.554  1.00 27.71           C
ATOM   2210  CG1 VAL A 287      32.253  45.915  20.615  1.00 26.17           C
ATOM   2211  CG2 VAL A 287      32.978  47.584  22.327  1.00 27.97           C
ATOM   2212  N   THR A 288      30.201  50.350  21.300  1.00 31.59           N
ATOM   2213  CA  THR A 288      29.442  51.348  22.061  1.00 31.99           C
ATOM   2214  C   THR A 288      28.025  50.882  22.353  1.00 31.50           C
ATOM   2215  O   THR A 288      27.594  50.879  23.502  1.00 35.22           O
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ATOM   2216  CB  THR A 288      29.349  52.666  21.283  1.00 32.87           C
ATOM   2217  OG1 THR A 288      30.650  53.256  21.191  1.00 34.28           O
ATOM   2218  CG2 THR A 288      28.402  53.627  21.968  1.00 34.63           C
ATOM   2219  N   ARG A 289      27.324  50.483  21.294  1.00 32.17           N
ATOM   2220  CA  ARG A 289      25.947  49.997  21.352  1.00 28.97           C
ATOM   2221  C   ARG A 289      25.798  48.835  22.346  1.00 30.50           C
ATOM   2222  O   ARG A 289      24.856  48.791  23.150  1.00 29.66           O
ATOM   2223  CB  ARG A 289      25.523  49.564  19.940  1.00 29.03           C
ATOM   2224  CG  ARG A 289      24.034  49.451  19.713  1.00 29.25           C
ATOM   2225  CD  ARG A 289      23.709  49.003  18.297  1.00 30.27           C
ATOM   2226  NE  ARG A 289      23.298  50.085  17.396  1.00 28.78           N
ATOM   2227  CZ  ARG A 289      22.577  49.889  16.286  1.00 33.52           C
ATOM   2228  NH1 ARG A 289      22.190  48.662  15.947  1.00 29.74           N
ATOM   2229  NH2 ARG A 289      22.251  50.909  15.494  1.00 29.58           N
ATOM   2230  N   LEU A 290      26.760  47.918  22.320  1.00 29.70           N
ATOM   2231  CA  LEU A 290      26.736  46.770  23.215  1.00 30.13           C
ATOM   2232  C   LEU A 290      26.942  47.193  24.666  1.00 32.12           C
ATOM   2233  O   LEU A 290      26.277  46.685  25.575  1.00 30.35           O
ATOM   2234  CB  LEU A 290      27.814  45.770  22.818  1.00 28.80           C
ATOM   2235  CG  LEU A 290      27.879  44.502  23.660  1.00 29.78           C
ATOM   2236  CD1 LEU A 290      26.551  43.743  23.593  1.00 26.15           C
ATOM   2237  CD2 LEU A 290      29.039  43.651  23.171  1.00 32.54           C
ATOM   2238  N   HIS A 291      27.884  48.105  24.883  1.00 33.34           N
ATOM   2239  CA  HIS A 291      28.176  48.578  26.227  1.00 35.34           C
ATOM   2240  C   HIS A 291      26.993  49.333  26.805  1.00 38.37           C
ATOM   2241  O   HIS A 291      26.672  49.178  27.985  1.00 39.48           O
ATOM   2242  CB  HIS A 291      29.445  49.421  26.222  1.00 32.75           C
ATOM   2243  CG  HIS A 291      30.688  48.612  26.029  1.00 30.97           C
ATOM   2244  ND1 HIS A 291      31.930  49.177  25.840  1.00 29.51           N
ATOM   2245  CD2 HIS A 291      30.878  47.267  26.017  1.00 26.20           C
ATOM   2246  CE1 HIS A 291      32.836  48.217  25.723  1.00 28.24           C
ATOM   2247  NE2 HIS A 291      32.221  47.053  25.827  1.00 29.24           N
ATOM   2248  N   GLN A 292      26.310  50.103  25.959  1.00 39.38           N
ATOM   2249  CA  GLN A 292      25.130  50.842  26.395  1.00 40.56           C
ATOM   2250  C   GLN A 292      23.996  49.881  26.737  1.00 38.72           C
ATOM   2251  O   GLN A 292      23.086  50.243  27.467  1.00 40.34           O
ATOM   2252  CB  GLN A 292      24.690  51.854  25.344  1.00 41.02           C
ATOM   2253  CG  GLN A 292      25.657  53.022  25.230  1.00 48.96           C
ATOM   2254  CD  GLN A 292      25.282  54.014  24.131  1.00 56.32           C
ATOM   2255  OE1 GLN A 292      25.637  55.197  24.204  1.00 56.24           O
ATOM   2256  NE2 GLN A 292      24.579  53.535  23.097  1.00 55.58           N
ATOM   2257  N   LEU A 293      24.049  48.660  26.211  1.00 34.67           N
ATOM   2258  CA  LEU A 293      23.037  47.658  26.523  1.00 31.56           C
ATOM   2259  C   LEU A 293      23.447  46.956  27.814  1.00 33.06           C
ATOM   2260  O   LEU A 293      22.858  45.937  28.202  1.00 30.36           O
ATOM   2261  CB  LEU A 293      22.913  46.628  25.403  1.00 36.08           C
ATOM   2262  CG  LEU A 293      22.304  47.081  24.080  1.00 38.51           C
ATOM   2263  CD1 LEU A 293      22.329  45.911  23.118  1.00 36.37           C
ATOM   2264  CD2 LEU A 293      20.876  47.570  24.296  1.00 38.13           C
ATOM   2265  N   GLY A 294      24.510  47.475  28.431  1.00 34.62           N
ATOM   2266  CA  GLY A 294      25.012  46.943  29.691  1.00 36.15           C
ATOM   2267  C   GLY A 294      25.848  45.671  29.709  1.00 35.13           C
ATOM   2268  O   GLY A 294      25.885  44.980  30.726  1.00 35.69           O
ATOM   2269  N   TRP A 295      26.511  45.337  28.607  1.00 34.36           N
ATOM   2270  CA  TRP A 295      27.337  44.138  28.598  1.00 30.98           C
ATOM   2271  C   TRP A 295      28.787  44.487  28.337  1.00 31.48           C
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ATOM   2272  O   TRP A 295      29.090  45.321  27.475  1.00 30.22           O
ATOM   2273  CB  TRP A 295      26.851  43.117  27.569  1.00 28.03           C
ATOM   2274  CG  TRP A 295      27.566  41.799  27.685  1.00 28.70           C
ATOM   2275  CD1 TRP A 295      27.197  40.731  28.449  1.00 27.81           C
ATOM   2276  CD2 TRP A 295      28.782  41.418  27.024  1.00 25.62           C
ATOM   2277  NE1 TRP A 295      28.105  39.707  28.304  1.00 29.40           N
ATOM   2278  CE2 TRP A 295      29.087  40.106  27.436  1.00 27.15           C
ATOM   2279  CE3 TRP A 295      29.639  42.060  26.120  1.00 26.82           C
ATOM   2280  CZ2 TRP A 295      30.215  39.424  26.978  1.00 27.03           C
ATOM   2281  CZ3 TRP A 295      30.755  41.385  25.665  1.00 24.97           C
ATOM   2282  CH2 TRP A 295      31.035  40.078  26.093  1.00 27.00           C
ATOM   2283  N   TYR A 296      29.663  43.849  29.115  1.00 31.36           N
ATOM   2284  CA  TYR A 296      31.109  44.021  29.022  1.00 31.61           C
ATOM   2285  C   TYR A 296      31.775  42.653  29.121  1.00 32.30           C
ATOM   2286  O   TYR A 296      31.335  41.793  29.889  1.00 34.35           O
ATOM   2287  CB  TYR A 296      31.610  44.917  30.145  1.00 33.20           C
ATOM   2288  CG  TYR A 296      31.291  46.373  29.948  1.00 39.46           C
ATOM   2289  CD1 TYR A 296      30.042  46.898  30.316  1.00 42.21           C
ATOM   2290  CD2 TYR A 296      32.240  47.238  29.407  1.00 41.88           C
ATOM   2291  CE1 TYR A 296      29.744  48.254  30.147  1.00 43.94           C
ATOM   2292  CE2 TYR A 296      31.960  48.597  29.236  1.00 47.98           C
ATOM   2293  CZ  TYR A 296      30.711  49.102  29.608  1.00 49.98           C
ATOM   2294  OH  TYR A 296      30.448  50.454  29.444  1.00 54.16           O
ATOM   2295  N   HIS A 297      32.830  42.448  28.336  1.00 32.28           N
ATOM   2296  CA  HIS A 297      33.534  41.169  28.335  1.00 34.79           C
ATOM   2297  C   HIS A 297      34.309  40.937  29.625  1.00 37.14           C
ATOM   2298  O   HIS A 297      34.730  41.889  30.284  1.00 39.70           O
ATOM   2299  CB  HIS A 297      34.471  41.063  27.128  1.00 32.40           C
ATOM   2300  CG  HIS A 297      35.589  42.055  27.140  1.00 30.14           C
ATOM   2301  ND1 HIS A 297      35.385  43.406  26.961  1.00 32.99           N
ATOM   2302  CD2 HIS A 297      36.924  41.891  27.289  1.00 29.27           C
ATOM   2303  CE1 HIS A 297      36.547  44.033  26.996  1.00 29.09           C
ATOM   2304  NE2 HIS A 297      37.496  43.137  27.193  1.00 28.81           N
ATOM   2305  N   GLU A 298      34.506  39.666  29.964  1.00 37.95           N
ATOM   2306  CA  GLU A 298      35.215  39.282  31.177  1.00 39.72           C
ATOM   2307  C   GLU A 298      36.573  38.623  30.959  1.00 38.27           C
ATOM   2308  O   GLU A 298      37.493  38.807  31.759  1.00 39.61           O
ATOM   2309  CB  GLU A 298      34.344  38.347  32.002  1.00 42.46           C
ATOM   2310  CG  GLU A 298      33.146  39.034  32.594  1.00 55.98           C
ATOM   2311  CD  GLU A 298      32.374  38.122  33.506  1.00 63.04           C
ATOM   2312  OE1 GLU A 298      32.800  37.957  34.671  1.00 68.90           O
ATOM   2313  OE2 GLU A 298      31.353  37.556  33.054  1.00 68.64           O
ATOM   2314  N   ILE A 299      36.694  37.857  29.883  1.00 33.27           N
ATOM   2315  CA  ILE A 299      37.928  37.142  29.583  1.00 29.85           C
ATOM   2316  C   ILE A 299      38.984  37.974  28.849  1.00 29.75           C
ATOM   2317  O   ILE A 299      38.759  38.439  27.728  1.00 28.05           O
ATOM   2318  CB  ILE A 299      37.598  35.851  28.816  1.00 27.12           C
ATOM   2319  CG1 ILE A 299      36.603  35.020  29.635  1.00 24.67           C
ATOM   2320  CG2 ILE A 299      38.847  35.051  28.562  1.00 26.04           C
ATOM   2321  CD1 ILE A 299      35.847  33.965  28.834  1.00 26.64           C
ATOM   2322  N   SER A 300      40.117  38.199  29.515  1.00 28.39           N
ATOM   2323  CA  SER A 300      41.220  38.961  28.924  1.00 29.33           C
ATOM   2324  C   SER A 300      42.012  38.022  28.005  1.00 28.04           C
ATOM   2325  O   SER A 300      41.935  36.800  28.150  1.00 27.86           O
ATOM   2326  CB  SER A 300      42.138  39.517  30.008  1.00 28.67           C
ATOM   2327  OG  SER A 300      42.924  38.477  30.571  1.00 36.57           O
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ATOM   2328  N   LEU A 301      42.806  38.590  27.100  1.00 28.52           N
ATOM   2329  CA  LEU A 301      43.573  37.786  26.144  1.00 29.49           C
ATOM   2330  C   LEU A 301      44.470  36.691  26.743  1.00 30.74           C
ATOM   2331  O   LEU A 301      44.337  35.514  26.392  1.00 28.70           O
ATOM   2332  CB  LEU A 301      44.390  38.685  25.214  1.00 25.35           C
ATOM   2333  CG  LEU A 301      44.994  37.935  24.022  1.00 28.28           C
ATOM   2334  CD1 LEU A 301      43.908  37.432  23.080  1.00 22.78           C
ATOM   2335  CD2 LEU A 301      45.942  38.849  23.288  1.00 31.27           C
ATOM   2336  N   GLU A 302      45.366  37.084  27.648  1.00 32.28           N
ATOM   2337  CA  GLU A 302      46.292  36.151  28.291  1.00 34.28           C
ATOM   2338  C   GLU A 302      45.523  35.020  28.957  1.00 31.09           C
ATOM   2339  O   GLU A 302      45.886  33.845  28.818  1.00 31.39           O
ATOM   2340  CB  GLU A 302      47.142  36.857  29.361  1.00 42.17           C
ATOM   2341  CG  GLU A 302      47.630  38.262  29.012  1.00 55.68           C
ATOM   2342  CD  GLU A 302      46.574  39.350  29.257  1.00 61.61           C
ATOM   2343  OE1 GLU A 302      46.081  39.463  30.412  1.00 68.31           O
ATOM   2344  OE2 GLU A 302      46.248  40.095  28.300  1.00 59.92           O
ATOM   2345  N   ALA A 303      44.469  35.387  29.685  1.00 24.87           N
ATOM   2346  CA  ALA A 303      43.638  34.424  30.390  1.00 23.75           C
ATOM   2347  C   ALA A 303      42.914  33.500  29.415  1.00 25.07           C
ATOM   2348  O   ALA A 303      42.889  32.284  29.615  1.00 27.32           O
ATOM   2349  CB  ALA A 303      42.642  35.143  31.279  1.00 25.09           C
ATOM   2350  N   GLY A 304      42.373  34.076  28.339  1.00 23.12           N
ATOM   2351  CA  GLY A 304      41.663  33.291  27.342  1.00 22.44           C
ATOM   2352  C   GLY A 304      42.550  32.342  26.552  1.00 24.32           C
ATOM   2353  O   GLY A 304      42.114  31.247  26.182  1.00 25.79           O
ATOM   2354  N   LEU A 305      43.778  32.766  26.261  1.00 21.31           N
ATOM   2355  CA  LEU A 305      44.715  31.927  25.520  1.00 23.11           C
ATOM   2356  C   LEU A 305      45.208  30.768  26.374  1.00 23.15           C
ATOM   2357  O   LEU A 305      45.386  29.651  25.886  1.00 22.55           O
ATOM   2358  CB  LEU A 305      45.910  32.746  25.029  1.00 23.22           C
ATOM   2359  CG  LEU A 305      45.668  33.775  23.925  1.00 22.87           C
ATOM   2360  CD1 LEU A 305      46.938  34.582  23.721  1.00 20.99           C
ATOM   2361  CD2 LEU A 305      45.251  33.082  22.642  1.00 19.00           C
ATOM   2362  N   ALA A 306      45.417  31.042  27.657  1.00 24.36           N
ATOM   2363  CA  ALA A 306      45.887  30.026  28.588  1.00 24.30           C
ATOM   2364  C   ALA A 306      44.854  28.899  28.718  1.00 25.04           C
ATOM   2365  O   ALA A 306      45.190  27.724  28.554  1.00 24.96           O
ATOM   2366  CB  ALA A 306      46.190  30.663  29.944  1.00 21.48           C
ATOM   2367  N   SER A 307      43.590  29.260  28.945  1.00 25.27           N
ATOM   2368  CA  SER A 307      42.526  28.261  29.069  1.00 26.72           C
ATOM   2369  C   SER A 307      42.263  27.545  27.741  1.00 24.99           C
ATOM   2370  O   SER A 307      41.984  26.345  27.720  1.00 27.94           O
ATOM   2371  CB  SER A 307      41.230  28.887  29.610  1.00 27.12           C
ATOM   2372  OG  SER A 307      40.606  29.715  28.648  1.00 34.58           O
ATOM   2373  N   THR A 308      42.345  28.276  26.633  1.00 22.71           N
ATOM   2374  CA  THR A 308      42.148  27.676  25.312  1.00 21.63           C
ATOM   2375  C   THR A 308      43.265  26.652  25.019  1.00 24.17           C
ATOM   2376  O   THR A 308      43.014  25.599  24.415  1.00 22.61           O
ATOM   2377  CB  THR A 308      42.175  28.750  24.204  1.00 21.63           C
ATOM   2378  OG1 THR A 308      41.130  29.698  24.427  1.00 21.39           O
ATOM   2379  CG2 THR A 308      42.006  28.113  22.841  1.00 18.60           C
ATOM   2380  N   TYR A 309      44.499  26.984  25.421  1.00 24.10           N
ATOM   2381  CA  TYR A 309      45.642  26.094  25.209  1.00 24.56           C
ATOM   2382  C   TYR A 309      45.445  24.826  26.031  1.00 26.12           C
ATOM   2383  O   TYR A 309      45.786  23.729  25.597  1.00 24.68           O
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ATOM   2384  CB  TYR A 309      46.958  26.772  25.619  1.00 22.73           C
ATOM   2385  CG  TYR A 309      48.192  25.916  25.344  1.00 21.35           C
ATOM   2386  CD1 TYR A 309      48.391  25.340  24.091  1.00 17.41           C
ATOM   2387  CD2 TYR A 309      49.135  25.658  26.348  1.00 20.03           C
ATOM   2388  CE1 TYR A 309      49.479  24.532  23.838  1.00 17.86           C
ATOM   2389  CE2 TYR A 309      50.237  24.845  26.100  1.00 17.60           C
ATOM   2390  CZ  TYR A 309      50.398  24.289  24.838  1.00 19.60           C
ATOM   2391  OH  TYR A 309      51.489  23.500  24.551  1.00 22.30           O
ATOM   2392  N   GLN A 310      44.917  25.002  27.235  1.00 28.39           N
ATOM   2393  CA  GLN A 310      44.649  23.902  28.141  1.00 31.72           C
ATOM   2394  C   GLN A 310      43.661  22.951  27.479  1.00 32.49           C
ATOM   2395  O   GLN A 310      43.833  21.732  27.527  1.00 34.18           O
ATOM   2396  CB  GLN A 310      44.067  24.445  29.445  1.00 36.90           C
ATOM   2397  CG  GLN A 310      44.255  23.534  30.625  1.00 49.45           C
ATOM   2398  CD  GLN A 310      45.682  23.035  30.724  1.00 57.63           C
ATOM   2399  OE1 GLN A 310      45.914  21.845  30.934  1.00 63.33           O
ATOM   2400  NE2 GLN A 310      46.649  23.935  30.527  1.00 58.16           N
ATOM   2401  N   TRP A 311      42.645  23.518  26.832  1.00 31.23           N
ATOM   2402  CA  TRP A 311      41.639  22.714  26.147  1.00 31.11           C
ATOM   2403  C   TRP A 311      42.302  21.935  25.012  1.00 31.99           C
ATOM   2404  O   TRP A 311      42.044  20.742  24.825  1.00 31.84           O
ATOM   2405  CB  TRP A 311      40.514  23.597  25.581  1.00 29.00           C
ATOM   2406  CG  TRP A 311      39.420  22.793  24.916  1.00 29.42           C
ATOM   2407  CD1 TRP A 311      38.335  22.231  25.531  1.00 26.67           C
ATOM   2408  CD2 TRP A 311      39.338  22.408  23.531  1.00 27.15           C
ATOM   2409  NE1 TRP A 311      37.590  21.516  24.622  1.00 28.98           N
ATOM   2410  CE2 TRP A 311      38.180  21.605  23.389  1.00 28.33           C
ATOM   2411  CE3 TRP A 311      40.128  22.656  22.404  1.00 27.17           C
ATOM   2412  CZ2 TRP A 311      37.793  21.048  22.164  1.00 26.56           C
ATOM   2413  CZ3 TRP A 311      39.744  22.103  21.182  1.00 28.52           C
ATOM   2414  CH2 TRP A 311      38.584  21.305  21.076  1.00 28.56           C
ATOM   2415  N   PHE A 312      43.122  22.635  24.231  1.00 32.17           N
ATOM   2416  CA  PHE A 312      43.831  22.028  23.118  1.00 29.55           C
ATOM   2417  C   PHE A 312      44.671  20.835  23.584  1.00 30.34           C
ATOM   2418  O   PHE A 312      44.729  19.812  22.905  1.00 27.47           O
ATOM   2419  CB  PHE A 312      44.733  23.066  22.442  1.00 30.35           C
ATOM   2420  CG  PHE A 312      45.645  22.478  21.420  1.00 31.04           C
ATOM   2421  CD1 PHE A 312      45.151  22.092  20.177  1.00 32.20           C
ATOM   2422  CD2 PHE A 312      46.980  22.229  21.726  1.00 31.50           C
ATOM   2423  CE1 PHE A 312      45.970  21.457  19.251  1.00 31.85           C
ATOM   2424  CE2 PHE A 312      47.813  21.597  20.811  1.00 31.01           C
ATOM   2425  CZ  PHE A 312      47.309  21.208  19.571  1.00 31.64           C
ATOM   2426  N   LEU A 313      45.323  20.979  24.738  1.00 33.12           N
ATOM   2427  CA  LEU A 313      46.167  19.918  25.297  1.00 36.68           C
ATOM   2428  C   LEU A 313      45.368  18.655  25.582  1.00 40.51           C
ATOM   2429  O   LEU A 313      45.756  17.562  25.164  1.00 44.34           O
ATOM   2430  CB  LEU A 313      46.884  20.385  26.572  1.00 29.25           C
ATOM   2431  CG  LEU A 313      48.027  21.385  26.382  1.00 28.06           C
ATOM   2432  CD1 LEU A 313      48.561  21.841  27.733  1.00 27.40           C
ATOM   2433  CD2 LEU A 313      49.130  20.763  25.554  1.00 19.50           C
ATOM   2434  N   GLU A 314      44.227  18.811  26.245  1.00 42.01           N
ATOM   2435  CA  GLU A 314      43.383  17.668  26.569  1.00 45.91           C
ATOM   2436  C   GLU A 314      42.621  17.084  25.370  1.00 46.34           C
ATOM   2437  O   GLU A 314      42.000  16.033  25.494  1.00 49.20           O
ATOM   2438  CB  GLU A 314      42.389  18.058  27.660  1.00 48.97           C
ATOM   2439  CG  GLU A 314      43.039  18.517  28.959  1.00 58.50           C
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ATOM   2440  CD  GLU A 314      42.070  19.248  29.898  1.00 65.29           C
ATOM   2441  OE1 GLU A 314      40.900  19.485  29.507  1.00 68.83           O
ATOM   2442  OE2 GLU A 314      42.486  19.604  31.027  1.00 67.52           O
ATOM   2443  N   ASN A 315      42.713  17.722  24.205  1.00 45.61           N
ATOM   2444  CA  ASN A 315      41.985  17.275  23.018  1.00 44.25           C
ATOM   2445  C   ASN A 315      42.816  17.210  21.757  1.00 46.82           C
ATOM   2446  O   ASN A 315      42.257  17.117  20.671  1.00 45.19           O
ATOM   2447  CB  ASN A 315      40.833  18.242  22.724  1.00 42.66           C
ATOM   2448  CG  ASN A 315      39.659  18.073  23.659  1.00 43.06           C
ATOM   2449  OD1 ASN A 315      38.697  17.375  23.338  1.00 44.33           O
ATOM   2450  ND2 ASN A 315      39.705  18.751  24.800  1.00 42.34           N
ATOM   2451  N   GLN A 316      44.136  17.275  21.875  1.00 53.33           N
ATOM   2452  CA  GLN A 316      44.972  17.270  20.677  1.00 60.48           C
ATOM   2453  C   GLN A 316      44.847  16.048  19.781  1.00 65.81           C
ATOM   2454  O   GLN A 316      45.153  16.117  18.582  1.00 65.72           O
ATOM   2455  CB  GLN A 316      46.431  17.567  21.008  1.00 58.72           C
ATOM   2456  CG  GLN A 316      47.050  16.665  22.027  1.00 59.42           C
ATOM   2457  CD  GLN A 316      48.439  17.121  22.398  1.00 59.39           C
ATOM   2458  OE1 GLN A 316      48.766  17.235  23.577  1.00 62.50           O
ATOM   2459  NE2 GLN A 316      49.263  17.398  21.393  1.00 57.86           N
ATOM   2460  N   ASP A 317      44.395  14.933  20.354  1.00 72.58           N
ATOM   2461  CA  ASP A 317      44.205  13.718  19.570  1.00 78.11           C
ATOM   2462  C   ASP A 317      42.824  13.766  18.929  1.00 78.14           C
ATOM   2463  O   ASP A 317      41.931  12.985  19.253  1.00 79.55           O
ATOM   2464  CB  ASP A 317      44.406  12.456  20.420  1.00 83.78           C
ATOM   2465  CG  ASP A 317      45.880  12.032  20.501  1.00 90.58           C
ATOM   2466  OD1 ASP A 317      46.566  12.009  19.446  1.00 92.85           O
ATOM   2467  OD2 ASP A 317      46.355  11.724  21.619  1.00 93.50           O
ATOM   2468  N   ARG A 318      42.670  14.758  18.057  1.00 77.85           N
ATOM   2469  CA  ARG A 318      41.455  15.037  17.296  1.00 77.09           C
ATOM   2470  C   ARG A 318      41.895  15.851  16.086  1.00 76.19           C
ATOM   2471  O   ARG A 318      41.159  15.970  15.104  1.00 76.03           O
ATOM   2472  CB  ARG A 318      40.473  15.886  18.117  1.00 76.30           C
ATOM   2473  CG  ARG A 318      39.757  15.143  19.231  1.00 77.09           C
ATOM   2474  CD  ARG A 318      39.045  16.097  20.168  1.00 76.69           C
ATOM   2475  NE  ARG A 318      38.099  16.964  19.473  1.00 76.44           N
ATOM   2476  CZ  ARG A 318      36.947  17.378  19.993  1.00 77.01           C
ATOM   2477  NH1 ARG A 318      36.592  17.000  21.214  1.00 75.98           N
ATOM   2478  NH2 ARG A 318      36.155  18.184  19.297  1.00 78.64           N
ATOM   2479  N   PHE A 319      43.111  16.396  16.171  1.00 74.90           N
ATOM   2480  CA  PHE A 319      43.685  17.233  15.118  1.00 74.68           C
ATOM   2481  C   PHE A 319      44.987  16.633  14.585  1.00 73.57           C
ATOM   2482  O   PHE A 319      45.745  16.001  15.327  1.00 74.47           O
ATOM   2483  CB  PHE A 319      43.944  18.652  15.664  1.00 71.17           C
ATOM   2484  CG  PHE A 319      42.801  19.217  16.485  1.00 64.60           C
ATOM   2485  CD1 PHE A 319      41.666  19.738  15.866  1.00 63.73           C
ATOM   2486  CD2 PHE A 319      42.856  19.211  17.876  1.00 64.05           C
ATOM   2487  CE1 PHE A 319      40.603  20.243  16.621  1.00 60.21           C
ATOM   2488  CE2 PHE A 319      41.798  19.714  18.639  1.00 62.15           C
ATOM   2489  CZ  PHE A 319      40.670  20.230  18.005  1.00 61.59           C
TER    2490      PHE A 319
HETATM 2491  O   HOH      3      16.295  46.079   6.392  1.00 15.94           O
HETATM 2492  O   HOH      4      61.547  40.087  15.062  1.00 21.47           O
HETATM 2493  O   HOH      5      36.997  37.687  25.554  1.00 20.65           O
HETATM 2494  O   HOH      6      29.311  45.751   4.024  1.00 21.71           O
HETATM 2495  O   HOH      7      21.568  46.184   9.524  1.00 17.42           O
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HETATM 2496  O   HOH     8      11.536  47.975   2.432  1.00 26.37           O
HETATM 2497  O   HOH     9      29.177  46.219   1.236  1.00 23.00           O
HETATM 2498  O   HOH    10      40.741  27.136   4.780  1.00 29.07           O
HETATM 2499  O   HOH    11      40.083  37.386  25.112  1.00 30.44           O
HETATM 2500  O   HOH    12      13.825  45.146   5.953  1.00 17.36           O
HETATM 2501  O   HOH    13       8.764  48.592  12.079  1.00 36.36           O
HETATM 2502  O   HOH    14      55.979  44.436  15.015  1.00 26.20           O
HETATM 2503  O   HOH    15      17.945  32.227  25.777  1.00 34.65           O
HETATM 2504  O   HOH    16      40.926  42.199  21.708  1.00 31.59           O
HETATM 2505  O   HOH    17      33.187  44.429  25.698  1.00 25.77           O
HETATM 2506  O   HOH    18      40.247  42.372  14.227  1.00 24.45           O
HETATM 2507  O   HOH    19      14.430  45.255  12.548  1.00 28.20           O
HETATM 2508  O   HOH    20      21.688  49.677   2.624  1.00 23.50           O
HETATM 2509  O   HOH    21      28.054  47.255  19.861  1.00 28.18           O
HETATM 2510  O   HOH    22      55.199  38.799  30.164  1.00 33.05           O
HETATM 2511  O   HOH    23      20.234  42.843  17.179  1.00 23.11           O
HETATM 2512  O   HOH    24      18.239  41.853  13.537  1.00 21.21           O
HETATM 2513  O   HOH    25      60.758  36.226  20.643  1.00 21.53           O
HETATM 2514  O   HOH    26      61.569  26.338  23.229  1.00 26.57           O
HETATM 2515  O   HOH    27       9.926  49.534  16.100  1.00 31.82           O
HETATM 2516  O   HOH    28       4.971  38.969  16.395  1.00 58.26           O
HETATM 2517  O   HOH    29      25.019  31.604  11.825  1.00 35.92           O
HETATM 2518  O   HOH    30      24.673  36.093  29.361  1.00 32.95           O
HETATM 2519  O   HOH    31      52.299  40.821  10.627  1.00 31.56           O
HETATM 2520  O   HOH    32      28.536  50.378  18.662  1.00 24.70           O
HETATM 2521  O   HOH    33      24.699  31.415   8.283  1.00 38.66           O
HETATM 2522  O   HOH    34      53.324  32.853   8.901  1.00 33.39           O
HETATM 2523  O   HOH    35       9.000  27.913   0.990  1.00 51.52           O
HETATM 2524  O   HOH    36      49.740  45.752  20.701  1.00 56.50           O
HETATM 2525  O   HOH    37      28.174  26.898  16.118  1.00 34.01           O
HETATM 2526  O   HOH    38      48.784  49.103  12.468  1.00 43.68           O
HETATM 2527  O   HOH    39      27.576  50.871  29.931  1.00 79.74           O
HETATM 2528  O   HOH    40      14.732  37.684  20.129  1.00 27.80           O
HETATM 2529  O   HOH    41      58.826  26.495  28.976  1.00 29.36           O
HETATM 2530  O   HOH    42      30.099  29.222  27.240  1.00 39.08           O
HETATM 2531  O   HOH    43      59.276  29.042  11.210  1.00 36.07           O
HETATM 2532  O   HOH    44      40.967  29.091  19.406  1.00 23.83           O
HETATM 2533  O   HOH    45      28.684  32.066  10.759  1.00 56.73           O
HETATM 2534  O   HOH    46      27.472  20.923  21.939  1.00 29.43           O
HETATM 2535  O   HOH    47      35.093  42.271   4.075  1.00 39.07           O
HETATM 2536  O   HOH    48      39.685  54.782  10.814  1.00 54.88           O
HETATM 2537  O   HOH    49       6.584  46.194  12.653  1.00 38.66           O
HETATM 2538  O   HOH    50      47.795  26.586  29.308  1.00 38.50           O
HETATM 2539  O   HOH    51      53.230  49.070  15.786  1.00 83.03           O
HETATM 2540  O   HOH    52      57.060  36.335  24.327  1.00 35.42           O
HETATM 2541  O   HOH    53      63.544  27.631  33.116  1.00 54.09           O
HETATM 2542  O   HOH    54      60.753  38.995  18.699  1.00 49.59           O
HETATM 2543  O   HOH    55      14.895  48.576  15.992  1.00 56.00           O
HETATM 2544  O   HOH    56      33.004  53.450  11.866  1.00 38.52           O
HETATM 2545  O   HOH    57      13.256  45.898  15.177  1.00 67.56           O
HETATM 2546  O   HOH    58       1.760  40.226   5.411  1.00 72.60           O
HETATM 2547  O   HOH    59      53.286  19.281  26.653  1.00 71.82           O
HETATM 2548  O   HOH    60      49.908  29.058  30.131  1.00 44.71           O
HETATM 2549  O   HOH    61      33.339  33.081   0.757  1.00 27.06           O
HETATM 2550  O   HOH    62      20.133  49.587   6.300  1.00 62.11           O
HETATM 2551  O   HOH    63      36.171  34.415  14.160  1.00 58.33           O
```

```
HETATM 2552  O   HOH    64      31.038  22.208  24.497  1.00 81.57           O
HETATM 2553  O   HOH    65      57.789  46.097   4.972  1.00100.00           O
HETATM 2554  O   HOH    66       9.514  39.392  21.996  1.00 57.91           O
HETATM 2555  O   HOH    67      13.056  15.987  15.463  1.00 71.44           O
HETATM 2556  O   HOH    68      41.897  33.505  15.432  1.00 45.09           O
HETATM 2557  O   HOH    69      55.565  43.726   5.895  1.00 34.28           O
HETATM 2558  O   HOH    70      39.612  31.330  15.361  1.00 61.92           O
HETATM 2559  O   HOH    71      44.907  38.858  10.949  1.00 87.38           O
HETATM 2560  O   HOH    72      63.134  26.447  21.083  1.00 48.64           O
HETATM 2561  O   HOH    73      42.581  49.438   8.669  1.00 69.28           O
HETATM 2562  O   HOH    74      21.047  22.360  14.667  1.00 48.13           O
HETATM 2563  O   HOH    75      63.710  36.536  22.148  1.00 41.62           O
HETATM 2564  O   HOH    76      50.559  20.064  31.488  1.00 59.27           O
HETATM 2565  O   HOH    77      54.997  22.252  23.878  1.00 42.51           O
HETATM 2566  O   HOH    78      25.841  20.981  15.423  1.00 71.86           O
HETATM 2567  O   HOH    79       8.438  32.383  20.614  1.00 57.09           O
HETATM 2568  O   HOH    80      10.522  42.067  25.960  1.00 73.56           O
HETATM 2569  O   HOH    81      33.664  31.525   6.814  1.00 60.75           O
HETATM 2570  O   HOH    82      37.020  42.162  13.423  1.00 58.93           O
MASTER      283    0    0   13   10    0    0    6 2569    1    0   25
END
```

```
HEADER    OXIDOREDUCTASE                          01-SEP-98   1FXS
TITLE     GDP-FUCOSE SYNTHETASE FROM ESCHERICHIA COLI COMPLEX WITH
TITLE    2 NADP
COMPND    MOL_ID: 1;
COMPND   2 MOLECULE: PROTEIN (GDP-FUCOSE SYNTHETASE);
COMPND   3 CHAIN: A;
COMPND   4 SYNONYM: WCAG, GDP-4-KETO 6-DEOXY-MANNOSE 3,5-EPIMERASE 4-
COMPND   5 REDUCTASE;
COMPND   6 ENGINEERED: YES
SOURCE    MOL_ID: 1;
SOURCE   2 ORGANISM_SCIENTIFIC: ESCHERICHIA COLI;
SOURCE   3 ORGANISM_COMMON: BACTERIA;
SOURCE   4 STRAIN: K12;
SOURCE   5 CELLULAR_LOCATION: CYTOPLASM;
SOURCE   6 GENE: WCAG;
SOURCE   7 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE   8 EXPRESSION_SYSTEM_COMMON: BACTERIA;
SOURCE   9 EXPRESSION_SYSTEM_STRAIN: BL-21;
SOURCE  10 EXPRESSION_SYSTEM_CELLULAR_LOCATION: CYTOPLASM;
SOURCE  11 EXPRESSION_SYSTEM_PLASMID: PSEWCAG;
SOURCE  12 EXPRESSION_SYSTEM_GENE: WCAG
KEYWDS    EPIMERASE-REDUCTASE, NADP, GDP-FUCOSE, FUCOSE SYNTHETASE
EXPDTA    X-RAY DIFFRACTION
AUTHOR    W.S.SOMERS,M.L.STAHL,F.X.SULLIVAN
REVDAT   2   27-DEC-00 1FXS    1       COMPND SOURCE REMARK JRNL
REVDAT   1   26-AUG-99 1FXS    0
JRNL        AUTH   W.S.SOMERS,M.L.STAHL,F.X.SULLIVAN
JRNL        TITL   GDP-FUCOSE SYNTHETASE FROM ESCHERICHIA COLI:
JRNL        TITL 2 STRUCTURE OF A UNIQUE MEMBER OF THE SHORT-CHAIN
JRNL        TITL 3 DEHYDROGENASE/REDUCTASE FAMILY THAT CATALYZES TWO
JRNL        TITL 4 DISTINCT REACTIONS AT THE SAME ACTIVE SITE.
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JRNL        REF    STRUCTURE                     V.   6  1601 1998
JRNL        REFN   ASTM STRUE6  UK ISSN 0969-2126
REMARK   1
REMARK   2
REMARK   2 RESOLUTION. 2.30 ANGSTROMS.
REMARK   3
REMARK   3 REFINEMENT.
REMARK   3   PROGRAM     : X-PLOR 3.843
REMARK   3   AUTHORS     : BRUNGER
REMARK   3
REMARK   3  DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) : 2.30
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) : 14.00
REMARK   3   DATA CUTOFF            (SIGMA(F)) : 2.000
REMARK   3   DATA CUTOFF HIGH         (ABS(F)) : NULL
REMARK   3   DATA CUTOFF LOW          (ABS(F)) : NULL
REMARK   3   COMPLETENESS (WORKING+TEST)   (%) : 96.3
REMARK   3   NUMBER OF REFLECTIONS             : 20373
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD          : NULL
REMARK   3   FREE R VALUE TEST SET SELECTION  : NULL
REMARK   3   R VALUE            (WORKING SET) : 0.163
REMARK   3   FREE R VALUE                     : NULL
REMARK   3   FREE R VALUE TEST SET SIZE   (%) : NULL
REMARK   3   FREE R VALUE TEST SET COUNT      : NULL
REMARK   3   ESTIMATED ERROR OF FREE R VALUE  : NULL
REMARK   3
REMARK   3  FIT IN THE HIGHEST RESOLUTION BIN.
REMARK   3   TOTAL NUMBER OF BINS USED           : NULL
REMARK   3   BIN RESOLUTION RANGE HIGH       (A) : NULL
REMARK   3   BIN RESOLUTION RANGE LOW        (A) : NULL
REMARK   3   BIN COMPLETENESS (WORKING+TEST) (%) : NULL
REMARK   3   REFLECTIONS IN BIN    (WORKING SET) : NULL
REMARK   3   BIN R VALUE           (WORKING SET) : NULL
REMARK   3   BIN FREE R VALUE                    : NULL
REMARK   3   BIN FREE R VALUE TEST SET SIZE  (%) : NULL
REMARK   3   BIN FREE R VALUE TEST SET COUNT     : NULL
REMARK   3   ESTIMATED ERROR OF BIN FREE R VALUE : NULL
REMARK   3
REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3   PROTEIN ATOMS            : 2498
REMARK   3   NUCLEIC ACID ATOMS       : 0
REMARK   3   HETEROGEN ATOMS          : 48
REMARK   3   SOLVENT ATOMS            : 83
REMARK   3
REMARK   3  B VALUES.
REMARK   3   FROM WILSON PLOT           (A**2) : NULL
REMARK   3   MEAN B VALUE      (OVERALL, A**2) : NULL
REMARK   3   OVERALL ANISOTROPIC B VALUE.
REMARK   3    B11 (A**2) : NULL
REMARK   3    B22 (A**2) : NULL
REMARK   3    B33 (A**2) : NULL
REMARK   3    B12 (A**2) : NULL
REMARK   3    B13 (A**2) : NULL
REMARK   3    B23 (A**2) : NULL
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REMARK   3
REMARK   3  ESTIMATED COORDINATE ERROR.
REMARK   3   ESD FROM LUZZATI PLOT        (A) : NULL
REMARK   3   ESD FROM SIGMAA              (A) : NULL
REMARK   3   LOW RESOLUTION CUTOFF        (A) : NULL
REMARK   3
REMARK   3  CROSS-VALIDATED ESTIMATED COORDINATE ERROR.
REMARK   3   ESD FROM C-V LUZZATI PLOT    (A) : NULL
REMARK   3   ESD FROM C-V SIGMAA          (A) : NULL
REMARK   3
REMARK   3  RMS DEVIATIONS FROM IDEAL VALUES.
REMARK   3   BOND LENGTHS                 (A) : 0.008
REMARK   3   BOND ANGLES            (DEGREES) : 1.35
REMARK   3   DIHEDRAL ANGLES        (DEGREES) : NULL
REMARK   3   IMPROPER ANGLES        (DEGREES) : NULL
REMARK   3
REMARK   3  ISOTROPIC THERMAL MODEL : NULL
REMARK   3
REMARK   3  ISOTROPIC THERMAL FACTOR RESTRAINTS.    RMS    SIGMA
REMARK   3   MAIN-CHAIN BOND              (A**2) : NULL  ; NULL
REMARK   3   MAIN-CHAIN ANGLE             (A**2) : NULL  ; NULL
REMARK   3   SIDE-CHAIN BOND              (A**2) : NULL  ; NULL
REMARK   3   SIDE-CHAIN ANGLE             (A**2) : NULL  ; NULL
REMARK   3
REMARK   3  NCS MODEL : NULL
REMARK   3
REMARK   3  NCS RESTRAINTS.                         RMS   SIGMA/WEIGHT
REMARK   3   GROUP  1  POSITIONAL            (A) : NULL  ; NULL
REMARK   3   GROUP  1  B-FACTOR           (A**2) : NULL  ; NULL
REMARK   3
REMARK   3  PARAMETER FILE  1  : PARHCSDX.PRO
REMARK   3  PARAMETER FILE  2  : NULL
REMARK   3  TOPOLOGY FILE  1   : TOPHCSDX.PRO
REMARK   3  TOPOLOGY FILE  2   : NULL
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS: NULL
REMARK   4
REMARK   4 1FXS COMPLIES WITH FORMAT V. 3.0, 1-DEC-2006
REMARK   4
REMARK   4 THIS IS THE REMEDIATED VERSION OF THIS PDB ENTRY.
REMARK   4 REMEDIATED DATA FILE REVISION 3.100 (2007-03-17)
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB .
REMARK 100 THE RCSB ID CODE IS RCSB007309.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200  EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200  DATE OF DATA COLLECTION        : 15-JUN-1997
REMARK 200  TEMPERATURE           (KELVIN) : 291.0
REMARK 200  PH                             : 7.00
REMARK 200  NUMBER OF CRYSTALS USED        : 1
REMARK 200
REMARK 200  SYNCHROTRON              (Y/N) : N
REMARK 200  RADIATION SOURCE               : ROTATING ANODE
REMARK 200  BEAMLINE                       : NULL
REMARK 200  X-RAY GENERATOR MODEL          : RIGAKU RU200
```

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REMARK 200  MONOCHROMATIC OR LAUE    (M/L) : M
REMARK 200  WAVELENGTH OR RANGE        (A) : 1.5418
REMARK 200  MONOCHROMATOR                  : NI FILTER
REMARK 200  OPTICS                         : MIRRORS
REMARK 200
REMARK 200  DETECTOR TYPE                  : NULL
REMARK 200  DETECTOR MANUFACTURER          : RIGAKU RAXIS II
REMARK 200  INTENSITY-INTEGRATION SOFTWARE : DENZO
REMARK 200  DATA SCALING SOFTWARE          : SCALEPACK
REMARK 200
REMARK 200  NUMBER OF UNIQUE REFLECTIONS   : 20596
REMARK 200  RESOLUTION RANGE HIGH      (A) : 2.300
REMARK 200  RESOLUTION RANGE LOW       (A) : 14.000
REMARK 200  REJECTION CRITERIA  (SIGMA(I)) : 0.000
REMARK 200
REMARK 200 OVERALL.
REMARK 200  COMPLETENESS FOR RANGE     (%) : 97.4
REMARK 200  DATA REDUNDANCY                : 7.900
REMARK 200  R MERGE                    (I) : 0.06200
REMARK 200  R SYM                      (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR THE DATA SET  : 26.4000
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.30
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : 2.38
REMARK 200  COMPLETENESS FOR SHELL     (%) : 81.0
REMARK 200  DATA REDUNDANCY IN SHELL       : NULL
REMARK 200  R MERGE FOR SHELL          (I) : NULL
REMARK 200  R SYM FOR SHELL            (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR SHELL         : 9.100
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: MOLECULAR REPLACEMENT
REMARK 200 SOFTWARE USED: NULL
REMARK 200 STARTING MODEL: 1GFS
REMARK 200
REMARK 200 REMARK: NULL
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS   (%): 62.17
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 3.25
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: 4.0 M SODIUM FORMATE, PH 7
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 32 2 1
REMARK 290
REMARK 290      SYMOP   SYMMETRY
REMARK 290     NNNMMM   OPERATOR
REMARK 290       1555   X,Y,Z
REMARK 290       2555   -Y,X-Y,2/3+Z
REMARK 290       3555   -X+Y,-X,1/3+Z
REMARK 290       4555   Y,X,-Z
REMARK 290       5555   X-Y,-Y,1/3-Z
REMARK 290       6555   -X,-X+Y,2/3-Z
REMARK 290
```

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REMARK 290     WHERE NNN -> OPERATOR NUMBER
REMARK 290           MMM -> TRANSLATION VECTOR
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY
REMARK 290 RELATED MOLECULES.
REMARK 290   SMTRY1   1  1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY2   1  0.000000  1.000000  0.000000        0.00000
REMARK 290   SMTRY3   1  0.000000  0.000000  1.000000        0.00000
REMARK 290   SMTRY1   2 -0.500000 -0.866025  0.000000        0.00000
REMARK 290   SMTRY2   2  0.866025 -0.500000  0.000000        0.00000
REMARK 290   SMTRY3   2  0.000000  0.000000  1.000000       50.06667
REMARK 290   SMTRY1   3 -0.500000  0.866025  0.000000        0.00000
REMARK 290   SMTRY2   3 -0.866025 -0.500000  0.000000        0.00000
REMARK 290   SMTRY3   3  0.000000  0.000000  1.000000       25.03333
REMARK 290   SMTRY1   4 -0.500000  0.866025  0.000000        0.00000
REMARK 290   SMTRY2   4  0.866025  0.500000  0.000000        0.00000
REMARK 290   SMTRY3   4  0.000000  0.000000 -1.000000        0.00000
REMARK 290   SMTRY1   5  1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY2   5  0.000000 -1.000000  0.000000        0.00000
REMARK 290   SMTRY3   5  0.000000  0.000000 -1.000000       25.03333
REMARK 290   SMTRY1   6 -0.500000 -0.866025  0.000000        0.00000
REMARK 290   SMTRY2   6 -0.866025  0.500000  0.000000        0.00000
REMARK 290   SMTRY3   6  0.000000  0.000000 -1.000000       50.06667
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF 1 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW.  BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE: 1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A
REMARK 350   BIOMT1   1  1.000000  0.000000  0.000000        0.00000
REMARK 350   BIOMT2   1  0.000000  1.000000  0.000000        0.00000
REMARK 350   BIOMT3   1  0.000000  0.000000  1.000000        0.00000
REMARK 350   BIOMT1   2 -0.500000  0.866025  0.000000       52.10000
REMARK 350   BIOMT2   2 -0.866025 -0.500000  0.000000       90.23985
REMARK 350   BIOMT3   2  0.000000  0.000000  1.000000       25.03333
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465   M RES C SSSEQI
REMARK 465     MET A     1
```

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REMARK 465     SER A     2
REMARK 465     ARG A   320
REMARK 465     GLY A   321
REMARK 470
REMARK 470 MISSING ATOM
REMARK 470 THE FOLLOWING RESIDUES HAVE MISSING ATOMS(M=MODEL NUMBER;
REMARK 470 RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE NUMBER;
REMARK 470 I=INSERTION CODE):
REMARK 470   M RES CSSEQI  ATOMS
REMARK 470     ARG A  45    CG    CD    NE    CZ    NH1   NH2
REMARK 470     ARG A  55    CG    CD    NE    CZ    NH1   NH2
REMARK 470     HIS A 174    CG    ND1   CD2   CE1   NE2
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   ATM2   ATM3
REMARK 500    VAL A  32   N   -  CA  -  C   ANGL. DEV. = -8.1 DEGREES
REMARK 500    TYR A  60   N   -  CA  -  C   ANGL. DEV. = -8.2 DEGREES
REMARK 500    LYS A  65   N   -  CA  -  C   ANGL. DEV. = -9.6 DEGREES
REMARK 500    ASP A  98   N   -  CA  -  C   ANGL. DEV. = 11.6 DEGREES
REMARK 500    VAL A  99   N   -  CA  -  C   ANGL. DEV. = -9.0 DEGREES
REMARK 500    LEU A 240   N   -  CA  -  C   ANGL. DEV. = -8.6 DEGREES
REMARK 500    SER A 241   N   -  CA  -  C   ANGL. DEV. =  9.1 DEGREES
REMARK 500    GLY A 279   N   -  CA  -  C   ANGL. DEV. = -8.2 DEGREES
REMARK 500    ASP A 286   N   -  CA  -  C   ANGL. DEV. =-10.9 DEGREES
REMARK 500    GLY A 294   N   -  CA  -  C   ANGL. DEV. =  8.3 DEGREES
REMARK 525
REMARK 525 SOLVENT
REMARK 525 THE FOLLOWING SOLVENT MOLECULES LIE FARTHER THAN EXPECTED
REMARK 525 FROM THE PROTEIN OR NUCLEIC ACID MOLECULE AND MAY BE
REMARK 525 ASSOCIATED WITH A SYMMETRY RELATED MOLECULE (M=MODEL
REMARK 525 NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE
REMARK 525 NUMBER; I=INSERTION CODE):
REMARK 525
REMARK 525  M RES CSSEQI
REMARK 525    HOH    20        DISTANCE =  5.45 ANGSTROMS
REMARK 525    HOH    27        DISTANCE =  6.02 ANGSTROMS
REMARK 525    HOH    76        DISTANCE =  5.15 ANGSTROMS
REMARK 900
REMARK 900 RELATED ENTRIES
REMARK 900 RELATED ID: 1BSV   RELATED DB: PDB
DBREF  1FXS A    1   321  UNP    P32055   FCL_ECOLI        1    321
SEQRES   1 A  321  MET SER LYS GLN ARG VAL PHE ILE ALA GLY HIS ARG GLY
SEQRES   2 A  321  MET VAL GLY SER ALA ILE ARG ARG GLN LEU GLU GLN ARG
SEQRES   3 A  321  GLY ASP VAL GLU LEU VAL LEU ARG THR ARG ASP GLU LEU
```

```
SEQRES   4 A  321  ASN LEU LEU ASP SER ARG ALA VAL HIS ASP PHE PHE ALA
SEQRES   5 A  321  SER GLU ARG ILE ASP GLN VAL TYR LEU ALA ALA ALA LYS
SEQRES   6 A  321  VAL GLY GLY ILE VAL ALA ASN ASN THR TYR PRO ALA ASP
SEQRES   7 A  321  PHE ILE TYR GLN ASN MET MET ILE GLU SER ASN ILE ILE
SEQRES   8 A  321  HIS ALA ALA HIS GLN ASN ASP VAL ASN LYS LEU LEU PHE
SEQRES   9 A  321  LEU GLY SER SER CYS ILE TYR PRO LYS LEU ALA LYS GLN
SEQRES  10 A  321  PRO MET ALA GLU SER GLU LEU LEU GLN GLY THR LEU GLU
SEQRES  11 A  321  PRO THR ASN GLU PRO TYR ALA ILE ALA LYS ILE ALA GLY
SEQRES  12 A  321  ILE LYS LEU CYS GLU SER TYR ASN ARG GLN TYR GLY ARG
SEQRES  13 A  321  ASP TYR ARG SER VAL MET PRO THR ASN LEU TYR GLY PRO
SEQRES  14 A  321  HIS ASP ASN PHE HIS PRO SER ASN SER HIS VAL ILE PRO
SEQRES  15 A  321  ALA LEU LEU ARG ARG PHE HIS GLU ALA THR ALA GLN ASN
SEQRES  16 A  321  ALA PRO ASP VAL VAL VAL TRP GLY SER GLY THR PRO MET
SEQRES  17 A  321  ARG GLU PHE LEU HIS VAL ASP ASP MET ALA ALA ALA SER
SEQRES  18 A  321  ILE HIS VAL MET GLU LEU ALA HIS GLU VAL TRP LEU GLU
SEQRES  19 A  321  ASN THR GLN PRO MET LEU SER HIS ILE ASN VAL GLY THR
SEQRES  20 A  321  GLY VAL ASP CYS THR ILE ARG GLU LEU ALA GLN THR ILE
SEQRES  21 A  321  ALA LYS VAL VAL GLY TYR LYS GLY ARG VAL VAL PHE ASP
SEQRES  22 A  321  ALA SER LYS PRO ASP GLY THR PRO ARG LYS LEU LEU ASP
SEQRES  23 A  321  VAL THR ARG LEU HIS GLN LEU GLY TRP TYR HIS GLU ILE
SEQRES  24 A  321  SER LEU GLU ALA GLY LEU ALA SER THR TYR GLN TRP PHE
SEQRES  25 A  321  LEU GLU ASN GLN ASP ARG PHE ARG GLY
HET    NAP    350      48
HETNAM     NAP NADP NICOTINAMIDE-ADENINE-DINUCLEOTIDE PHOSPHATE
HETSYN     NAP 2'-MONOPHOSPHOADENOSINE 5'-DIPHOSPHORIBOSE
FORMUL   2  NAP    C21 H28 N7 O17 P3
FORMUL   3  HOH   *83(H2 O)
HELIX    1   1 MET A   14  GLU A   24  1                                  11
HELIX    2   2 SER A   44  SER A   53  1                                  10
HELIX    3   3 ILE A   69  THR A   74  1                                   6
HELIX    4   4 PRO A   76  GLN A   96  1                                  21
HELIX    5   5 SER A  108  ILE A  110  5                                   3
HELIX    6   6 GLU A  121  GLU A  123  5                                   3
HELIX    7   7 GLU A  134  TYR A  154  1                                  21
HELIX    8   8 VAL A  180  ALA A  193  1                                  14
HELIX    9   9 VAL A  214  GLU A  226  1                                  13
HELIX   10  10 HIS A  229  GLU A  234  1                                   6
HELIX   11  11 ILE A  253  VAL A  264  1                                  12
HELIX   12  12 THR A  288  GLN A  292  1                                   5
HELIX   13  13 LEU A  301  ASN A  315  1                                  15
SHEET    1   A 6 VAL A  29  VAL A  32  0
SHEET    2   A 6 GLN A   4  ALA A   9  1  N  GLN A   4   O  GLU A  30
SHEET    3   A 6 GLN A  58  LEU A  61  1  N  GLN A  58   O  PHE A   7
SHEET    4   A 6 LYS A 101  LEU A 105  1  N  LYS A 101   O  VAL A  59
SHEET    5   A 6 ASP A 157  PRO A 163  1  N  ASP A 157   O  LEU A 102
SHEET    6   A 6 ILE A 243  VAL A 245  1  N  ILE A 243   O  MET A 162
SHEET    1   B 2 ASN A 165  TYR A 167  0
SHEET    2   B 2 PHE A 211  HIS A 213  1  N  LEU A 212   O  ASN A 165
SHEET    1   C 2 ASP A 198  TRP A 202  0
SHEET    2   C 2 ARG A 269  ASP A 273  1  N  ARG A 269   O  VAL A 199
CISPEP   1 GLN A  117    PRO A  118          0        -0.48
CRYST1  104.200  104.200   75.100  90.00  90.00 120.00 P 32 2 1      6
ORIGX1      1.000000  0.000000  0.000000        0.00000
ORIGX2      0.000000  1.000000  0.000000        0.00000
ORIGX3      0.000000  0.000000  1.000000        0.00000
SCALE1      0.009597  0.005541  0.000000        0.00000
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SCALE2      0.000000  0.011082  0.000000        0.00000
SCALE3      0.000000  0.000000  0.013316        0.00000
ATOM      1  N   LYS A   3       8.487  27.148  31.421  1.00 63.40           N
ATOM      2  CA  LYS A   3       9.876  26.784  30.998  1.00 64.12           C
ATOM      3  C   LYS A   3      10.123  26.960  29.491  1.00 62.14           C
ATOM      4  O   LYS A   3       9.596  26.207  28.663  1.00 63.12           O
ATOM      5  CB  LYS A   3      10.209  25.345  31.410  1.00 63.30           C
ATOM      6  CG  LYS A   3      11.601  24.904  30.986  1.00 65.64           C
ATOM      7  CD  LYS A   3      11.930  23.504  31.457  1.00 68.19           C
ATOM      8  CE  LYS A   3      12.032  23.446  32.969  1.00 68.66           C
ATOM      9  NZ  LYS A   3      12.494  22.114  33.436  1.00 68.32           N
ATOM     10  N   GLN A   4      10.966  27.935  29.161  1.00 56.73           N
ATOM     11  CA  GLN A   4      11.335  28.262  27.787  1.00 50.52           C
ATOM     12  C   GLN A   4      11.960  27.099  27.012  1.00 46.61           C
ATOM     13  O   GLN A   4      12.878  26.447  27.503  1.00 48.29           O
ATOM     14  CB  GLN A   4      12.330  29.422  27.816  1.00 52.26           C
ATOM     15  CG  GLN A   4      11.912  30.612  26.999  1.00 60.91           C
ATOM     16  CD  GLN A   4      10.526  31.083  27.352  1.00 60.94           C
ATOM     17  OE1 GLN A   4       9.737  31.427  26.475  1.00 61.53           O
ATOM     18  NE2 GLN A   4      10.211  31.084  28.640  1.00 64.63           N
ATOM     19  N   ARG A   5      11.448  26.819  25.817  1.00 40.42           N
ATOM     20  CA  ARG A   5      12.013  25.759  24.980  1.00 39.41           C
ATOM     21  C   ARG A   5      12.883  26.397  23.894  1.00 38.18           C
ATOM     22  O   ARG A   5      12.381  27.038  22.963  1.00 33.66           O
ATOM     23  CB  ARG A   5      10.917  24.879  24.380  1.00 40.90           C
ATOM     24  CG  ARG A   5      10.458  23.784  25.326  1.00 45.44           C
ATOM     25  CD  ARG A   5       9.205  23.068  24.835  1.00 49.33           C
ATOM     26  NE  ARG A   5       9.378  22.341  23.571  1.00 49.18           N
ATOM     27  CZ  ARG A   5      10.061  21.208  23.429  1.00 48.95           C
ATOM     28  NH1 ARG A   5      10.669  20.651  24.471  1.00 48.56           N
ATOM     29  NH2 ARG A   5      10.074  20.593  22.254  1.00 45.39           N
ATOM     30  N   VAL A   6      14.196  26.225  24.047  1.00 35.36           N
ATOM     31  CA  VAL A   6      15.199  26.797  23.149  1.00 30.13           C
ATOM     32  C   VAL A   6      15.863  25.834  22.146  1.00 32.01           C
ATOM     33  O   VAL A   6      16.380  24.777  22.519  1.00 30.46           O
ATOM     34  CB  VAL A   6      16.303  27.485  23.989  1.00 26.37           C
ATOM     35  CG1 VAL A   6      17.334  28.144  23.102  1.00 25.95           C
ATOM     36  CG2 VAL A   6      15.683  28.494  24.928  1.00 25.81           C
ATOM     37  N   PHE A   7      15.820  26.204  20.867  1.00 29.50           N
ATOM     38  CA  PHE A   7      16.464  25.423  19.813  1.00 27.71           C
ATOM     39  C   PHE A   7      17.772  26.109  19.450  1.00 26.98           C
ATOM     40  O   PHE A   7      17.769  27.258  19.022  1.00 26.41           O
ATOM     41  CB  PHE A   7      15.599  25.345  18.549  1.00 25.44           C
ATOM     42  CG  PHE A   7      16.301  24.703  17.361  1.00 25.97           C
ATOM     43  CD1 PHE A   7      17.029  23.521  17.506  1.00 26.12           C
ATOM     44  CD2 PHE A   7      16.213  25.272  16.090  1.00 26.33           C
ATOM     45  CE1 PHE A   7      17.653  22.913  16.404  1.00 23.00           C
ATOM     46  CE2 PHE A   7      16.836  24.670  14.982  1.00 26.47           C
ATOM     47  CZ  PHE A   7      17.554  23.489  15.143  1.00 24.03           C
ATOM     48  N   ILE A   8      18.888  25.421  19.674  1.00 27.51           N
ATOM     49  CA  ILE A   8      20.199  25.949  19.311  1.00 25.96           C
ATOM     50  C   ILE A   8      20.622  25.187  18.062  1.00 24.40           C
ATOM     51  O   ILE A   8      20.908  23.992  18.122  1.00 25.95           O
ATOM     52  CB  ILE A   8      21.260  25.752  20.426  1.00 27.76           C
ATOM     53  CG1 ILE A   8      20.782  26.380  21.740  1.00 24.65           C
ATOM     54  CG2 ILE A   8      22.587  26.399  19.997  1.00 25.19           C
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ATOM     55  CD1 ILE A   8      21.715  26.149  22.916  1.00 24.58           C
ATOM     56  N   ALA A   9      20.537  25.856  16.915  1.00 23.86           N
ATOM     57  CA  ALA A   9      20.914  25.250  15.646  1.00 23.91           C
ATOM     58  C   ALA A   9      22.436  25.243  15.597  1.00 25.26           C
ATOM     59  O   ALA A   9      23.066  26.246  15.931  1.00 29.18           O
ATOM     60  CB  ALA A   9      20.338  26.060  14.476  1.00 23.77           C
ATOM     61  N   GLY A  10      23.018  24.111  15.205  1.00 24.45           N
ATOM     62  CA  GLY A  10      24.467  23.993  15.140  1.00 19.77           C
ATOM     63  C   GLY A  10      25.076  23.976  16.525  1.00 21.75           C
ATOM     64  O   GLY A  10      26.091  24.617  16.766  1.00 25.26           O
ATOM     65  N   HIS A  11      24.470  23.209  17.426  1.00 23.30           N
ATOM     66  CA  HIS A  11      24.922  23.117  18.815  1.00 26.87           C
ATOM     67  C   HIS A  11      26.283  22.435  19.022  1.00 28.63           C
ATOM     68  O   HIS A  11      26.849  22.515  20.111  1.00 29.23           O
ATOM     69  CB  HIS A  11      23.850  22.430  19.670  1.00 25.79           C
ATOM     70  CG  HIS A  11      23.600  21.007  19.281  1.00 29.13           C
ATOM     71  ND1 HIS A  11      24.017  19.941  20.052  1.00 30.95           N
ATOM     72  CD2 HIS A  11      23.049  20.473  18.166  1.00 25.65           C
ATOM     73  CE1 HIS A  11      23.740  18.814  19.422  1.00 28.73           C
ATOM     74  NE2 HIS A  11      23.154  19.109  18.275  1.00 32.29           N
ATOM     75  N   ARG A  12      26.781  21.750  17.994  1.00 30.60           N
ATOM     76  CA  ARG A  12      28.078  21.074  18.049  1.00 34.16           C
ATOM     77  C   ARG A  12      29.245  21.980  17.646  1.00 33.44           C
ATOM     78  O   ARG A  12      30.390  21.684  17.970  1.00 35.90           O
ATOM     79  CB  ARG A  12      28.079  19.842  17.143  1.00 41.07           C
ATOM     80  CG  ARG A  12      27.237  18.709  17.654  1.00 52.66           C
ATOM     81  CD  ARG A  12      27.836  18.176  18.941  1.00 69.04           C
ATOM     82  NE  ARG A  12      26.872  17.398  19.709  1.00 82.49           N
ATOM     83  CZ  ARG A  12      26.402  16.206  19.346  1.00 89.00           C
ATOM     84  NH1 ARG A  12      26.820  15.631  18.218  1.00 88.81           N
ATOM     85  NH2 ARG A  12      25.515  15.585  20.120  1.00 89.02           N
ATOM     86  N   GLY A  13      28.957  23.054  16.909  1.00 30.63           N
ATOM     87  CA  GLY A  13      29.997  23.973  16.477  1.00 24.58           C
ATOM     88  C   GLY A  13      30.610  24.751  17.623  1.00 26.60           C
ATOM     89  O   GLY A  13      30.165  24.638  18.766  1.00 28.64           O
ATOM     90  N   MET A  14      31.617  25.566  17.317  1.00 27.74           N
ATOM     91  CA  MET A  14      32.300  26.360  18.334  1.00 28.60           C
ATOM     92  C   MET A  14      31.382  27.304  19.110  1.00 28.82           C
ATOM     93  O   MET A  14      31.337  27.250  20.343  1.00 28.11           O
ATOM     94  CB  MET A  14      33.464  27.156  17.720  1.00 29.63           C
ATOM     95  CG  MET A  14      34.218  28.007  18.749  1.00 35.11           C
ATOM     96  SD  MET A  14      35.713  28.823  18.144  1.00 38.20           S
ATOM     97  CE  MET A  14      35.028  29.897  16.836  1.00 41.28           C
ATOM     98  N   VAL A  15      30.683  28.183  18.387  1.00 30.91           N
ATOM     99  CA  VAL A  15      29.772  29.155  19.004  1.00 28.96           C
ATOM    100  C   VAL A  15      28.511  28.472  19.554  1.00 29.06           C
ATOM    101  O   VAL A  15      28.062  28.781  20.663  1.00 27.35           O
ATOM    102  CB  VAL A  15      29.370  30.282  18.004  1.00 25.98           C
ATOM    103  CG1 VAL A  15      28.572  31.361  18.714  1.00 27.54           C
ATOM    104  CG2 VAL A  15      30.601  30.892  17.385  1.00 25.24           C
ATOM    105  N   GLY A  16      27.957  27.544  18.773  1.00 27.18           N
ATOM    106  CA  GLY A  16      26.769  26.826  19.186  1.00 26.50           C
ATOM    107  C   GLY A  16      26.952  26.104  20.507  1.00 28.70           C
ATOM    108  O   GLY A  16      26.117  26.238  21.407  1.00 25.18           O
ATOM    109  N   SER A  17      28.063  25.374  20.634  1.00 27.75           N
ATOM    110  CA  SER A  17      28.361  24.616  21.846  1.00 26.57           C
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ATOM    111  C   SER A  17      28.598  25.515  23.049  1.00 26.36           C
ATOM    112  O   SER A  17      28.277  25.138  24.173  1.00 27.07           O
ATOM    113  CB  SER A  17      29.558  23.685  21.629  1.00 26.69           C
ATOM    114  OG  SER A  17      30.779  24.391  21.606  1.00 30.87           O
ATOM    115  N   ALA A  18      29.140  26.708  22.807  1.00 26.00           N
ATOM    116  CA  ALA A  18      29.402  27.665  23.879  1.00 23.88           C
ATOM    117  C   ALA A  18      28.095  28.178  24.462  1.00 26.48           C
ATOM    118  O   ALA A  18      27.979  28.362  25.670  1.00 28.83           O
ATOM    119  CB  ALA A  18      30.229  28.823  23.362  1.00 25.30           C
ATOM    120  N   ILE A  19      27.123  28.440  23.589  1.00 27.39           N
ATOM    121  CA  ILE A  19      25.809  28.913  24.014  1.00 26.17           C
ATOM    122  C   ILE A  19      25.152  27.800  24.819  1.00 27.69           C
ATOM    123  O   ILE A  19      24.626  28.041  25.906  1.00 29.16           O
ATOM    124  CB  ILE A  19      24.939  29.331  22.802  1.00 22.71           C
ATOM    125  CG1 ILE A  19      25.498  30.632  22.216  1.00 25.48           C
ATOM    126  CG2 ILE A  19      23.480  29.528  23.212  1.00 16.93           C
ATOM    127  CD1 ILE A  19      24.930  31.015  20.877  1.00 24.74           C
ATOM    128  N   ARG A  20      25.264  26.575  24.312  1.00 29.80           N
ATOM    129  CA  ARG A  20      24.715  25.394  24.964  1.00 31.82           C
ATOM    130  C   ARG A  20      25.292  25.180  26.373  1.00 33.23           C
ATOM    131  O   ARG A  20      24.542  24.963  27.319  1.00 36.14           O
ATOM    132  CB  ARG A  20      24.945  24.157  24.090  1.00 31.23           C
ATOM    133  CG  ARG A  20      24.235  22.922  24.591  1.00 39.38           C
ATOM    134  CD  ARG A  20      25.172  21.994  25.331  1.00 47.85           C
ATOM    135  NE  ARG A  20      25.660  20.935  24.452  1.00 58.10           N
ATOM    136  CZ  ARG A  20      25.114  19.719  24.366  1.00 63.70           C
ATOM    137  NH1 ARG A  20      24.063  19.407  25.118  1.00 62.38           N
ATOM    138  NH2 ARG A  20      25.591  18.820  23.500  1.00 62.60           N
ATOM    139  N   ARG A  21      26.611  25.272  26.517  1.00 31.88           N
ATOM    140  CA  ARG A  21      27.253  25.084  27.813  1.00 30.90           C
ATOM    141  C   ARG A  21      26.657  26.000  28.854  1.00 32.92           C
ATOM    142  O   ARG A  21      26.454  25.592  29.994  1.00 36.60           O
ATOM    143  CB  ARG A  21      28.757  25.342  27.727  1.00 29.44           C
ATOM    144  CG  ARG A  21      29.573  24.121  27.351  1.00 29.28           C
ATOM    145  CD  ARG A  21      31.040  24.482  27.171  1.00 27.74           C
ATOM    146  NE  ARG A  21      31.401  24.573  25.761  1.00 32.10           N
ATOM    147  CZ  ARG A  21      32.087  25.573  25.220  1.00 31.29           C
ATOM    148  NH1 ARG A  21      32.494  26.588  25.966  1.00 32.74           N
ATOM    149  NH2 ARG A  21      32.384  25.545  23.927  1.00 44.41           N
ATOM    150  N   GLN A  22      26.358  27.230  28.454  1.00 34.63           N
ATOM    151  CA  GLN A  22      25.792  28.209  29.368  1.00 38.03           C
ATOM    152  C   GLN A  22      24.306  28.107  29.639  1.00 39.38           C
ATOM    153  O   GLN A  22      23.852  28.486  30.717  1.00 41.32           O
ATOM    154  CB  GLN A  22      26.125  29.616  28.919  1.00 38.78           C
ATOM    155  CG  GLN A  22      27.342  30.147  29.600  1.00 46.92           C
ATOM    156  CD  GLN A  22      27.751  31.471  29.054  1.00 49.85           C
ATOM    157  OE1 GLN A  22      28.820  31.601  28.450  1.00 51.38           O
ATOM    158  NE2 GLN A  22      26.900  32.474  29.246  1.00 53.63           N
ATOM    159  N   LEU A  23      23.541  27.644  28.657  1.00 39.35           N
ATOM    160  CA  LEU A  23      22.103  27.506  28.849  1.00 42.40           C
ATOM    161  C   LEU A  23      21.787  26.209  29.578  1.00 45.18           C
ATOM    162  O   LEU A  23      20.742  26.076  30.218  1.00 49.19           O
ATOM    163  CB  LEU A  23      21.340  27.583  27.519  1.00 35.08           C
ATOM    164  CG  LEU A  23      21.235  28.959  26.855  1.00 31.14           C
ATOM    165  CD1 LEU A  23      20.319  28.877  25.649  1.00 28.51           C
ATOM    166  CD2 LEU A  23      20.716  29.986  27.839  1.00 30.44           C
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ATOM    167  N   GLU A  24      22.711  25.262  29.504  1.00 47.58           N
ATOM    168  CA  GLU A  24      22.536  23.985  30.172  1.00 52.68           C
ATOM    169  C   GLU A  24      22.616  24.192  31.681  1.00 56.15           C
ATOM    170  O   GLU A  24      21.979  23.477  32.448  1.00 56.35           O
ATOM    171  CB  GLU A  24      23.626  23.030  29.724  1.00 53.12           C
ATOM    172  CG  GLU A  24      23.158  21.618  29.556  1.00 59.84           C
ATOM    173  CD  GLU A  24      24.010  20.874  28.559  1.00 65.73           C
ATOM    174  OE1 GLU A  24      25.259  20.942  28.672  1.00 67.44           O
ATOM    175  OE2 GLU A  24      23.426  20.243  27.649  1.00 64.22           O
ATOM    176  N   GLN A  25      23.374  25.209  32.086  1.00 60.95           N
ATOM    177  CA  GLN A  25      23.573  25.552  33.490  1.00 64.65           C
ATOM    178  C   GLN A  25      22.440  26.399  34.091  1.00 66.53           C
ATOM    179  O   GLN A  25      22.684  27.354  34.832  1.00 67.62           O
ATOM    180  CB  GLN A  25      24.922  26.260  33.655  1.00 66.39           C
ATOM    181  CG  GLN A  25      26.102  25.438  33.149  1.00 75.36           C
ATOM    182  CD  GLN A  25      27.421  26.198  33.194  1.00 81.42           C
ATOM    183  OE1 GLN A  25      28.181  26.088  34.158  1.00 85.20           O
ATOM    184  NE2 GLN A  25      27.704  26.965  32.142  1.00 82.69           N
ATOM    185  N   ARG A  26      21.204  26.071  33.723  1.00 65.48           N
ATOM    186  CA  ARG A  26      20.017  26.753  34.234  1.00 65.42           C
ATOM    187  C   ARG A  26      18.754  26.009  33.829  1.00 66.35           C
ATOM    188  O   ARG A  26      18.551  25.667  32.660  1.00 66.55           O
ATOM    189  CB  ARG A  26      19.962  28.236  33.841  1.00 64.01           C
ATOM    190  CG  ARG A  26      20.498  28.589  32.474  1.00 58.50           C
ATOM    191  CD  ARG A  26      20.481  30.094  32.289  1.00 53.26           C
ATOM    192  NE  ARG A  26      19.156  30.572  31.906  1.00 50.26           N
ATOM    193  CZ  ARG A  26      18.925  31.721  31.276  1.00 48.64           C
ATOM    194  NH1 ARG A  26      19.927  32.536  30.963  1.00 46.19           N
ATOM    195  NH2 ARG A  26      17.695  32.021  30.887  1.00 45.15           N
ATOM    196  N   GLY A  27      17.924  25.743  34.830  1.00 67.14           N
ATOM    197  CA  GLY A  27      16.703  24.990  34.629  1.00 66.67           C
ATOM    198  C   GLY A  27      15.467  25.718  34.160  1.00 67.07           C
ATOM    199  O   GLY A  27      14.415  25.086  34.016  1.00 67.80           O
ATOM    200  N   ASP A  28      15.558  27.030  33.954  1.00 65.57           N
ATOM    201  CA  ASP A  28      14.398  27.790  33.476  1.00 63.83           C
ATOM    202  C   ASP A  28      14.294  27.695  31.954  1.00 60.13           C
ATOM    203  O   ASP A  28      13.424  28.315  31.332  1.00 59.17           O
ATOM    204  CB  ASP A  28      14.463  29.255  33.935  1.00 65.76           C
ATOM    205  CG  ASP A  28      15.684  29.994  33.408  1.00 67.57           C
ATOM    206  OD1 ASP A  28      16.791  29.410  33.371  1.00 70.18           O
ATOM    207  OD2 ASP A  28      15.532  31.179  33.044  1.00 69.00           O
ATOM    208  N   VAL A  29      15.156  26.852  31.387  1.00 55.60           N
ATOM    209  CA  VAL A  29      15.248  26.627  29.953  1.00 49.86           C
ATOM    210  C   VAL A  29      15.367  25.137  29.639  1.00 45.70           C
ATOM    211  O   VAL A  29      16.089  24.403  30.311  1.00 47.16           O
ATOM    212  CB  VAL A  29      16.505  27.362  29.379  1.00 50.19           C
ATOM    213  CG1 VAL A  29      16.740  27.000  27.915  1.00 46.86           C
ATOM    214  CG2 VAL A  29      16.364  28.877  29.551  1.00 46.31           C
ATOM    215  N   GLU A  30      14.662  24.704  28.603  1.00 43.69           N
ATOM    216  CA  GLU A  30      14.714  23.319  28.158  1.00 44.47           C
ATOM    217  C   GLU A  30      15.267  23.332  26.732  1.00 41.67           C
ATOM    218  O   GLU A  30      14.700  23.983  25.854  1.00 41.55           O
ATOM    219  CB  GLU A  30      13.321  22.700  28.168  1.00 50.50           C
ATOM    220  CG  GLU A  30      13.345  21.181  28.182  1.00 63.50           C
ATOM    221  CD  GLU A  30      12.023  20.565  27.769  1.00 70.93           C
ATOM    222  OE1 GLU A  30      10.957  21.088  28.177  1.00 74.43           O
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ATOM    223  OE2 GLU A  30      12.059  19.556  27.026  1.00 72.56           O
ATOM    224  N   LEU A  31      16.360  22.608  26.503  1.00 37.30           N
ATOM    225  CA  LEU A  31      17.004  22.573  25.187  1.00 36.28           C
ATOM    226  C   LEU A  31      16.512  21.515  24.197  1.00 35.15           C
ATOM    227  O   LEU A  31      16.341  20.355  24.546  1.00 38.27           O
ATOM    228  CB  LEU A  31      18.524  22.433  25.347  1.00 35.30           C
ATOM    229  CG  LEU A  31      19.265  23.504  26.152  1.00 33.95           C
ATOM    230  CD1 LEU A  31      20.724  23.146  26.221  1.00 36.67           C
ATOM    231  CD2 LEU A  31      19.089  24.871  25.521  1.00 34.28           C
ATOM    232  N   VAL A  32      16.290  21.936  22.955  1.00 35.40           N
ATOM    233  CA  VAL A  32      15.859  21.042  21.877  1.00 33.71           C
ATOM    234  C   VAL A  32      17.044  21.060  20.918  1.00 35.27           C
ATOM    235  O   VAL A  32      17.361  22.098  20.342  1.00 39.30           O
ATOM    236  CB  VAL A  32      14.592  21.582  21.152  1.00 34.09           C
ATOM    237  CG1 VAL A  32      14.138  20.612  20.071  1.00 24.09           C
ATOM    238  CG2 VAL A  32      13.475  21.842  22.159  1.00 30.79           C
ATOM    239  N   LEU A  33      17.737  19.935  20.792  1.00 33.80           N
ATOM    240  CA  LEU A  33      18.912  19.874  19.933  1.00 31.98           C
ATOM    241  C   LEU A  33      18.820  18.761  18.908  1.00 34.10           C
ATOM    242  O   LEU A  33      18.281  17.692  19.183  1.00 34.99           O
ATOM    243  CB  LEU A  33      20.171  19.694  20.785  1.00 31.75           C
ATOM    244  CG  LEU A  33      20.308  20.581  22.033  1.00 32.80           C
ATOM    245  CD1 LEU A  33      21.498  20.135  22.844  1.00 32.76           C
ATOM    246  CD2 LEU A  33      20.437  22.054  21.674  1.00 31.95           C
ATOM    247  N   ARG A  34      19.373  19.012  17.728  1.00 33.18           N
ATOM    248  CA  ARG A  34      19.358  18.042  16.642  1.00 36.23           C
ATOM    249  C   ARG A  34      20.704  18.064  15.946  1.00 38.91           C
ATOM    250  O   ARG A  34      21.229  19.135  15.655  1.00 39.68           O
ATOM    251  CB  ARG A  34      18.266  18.408  15.629  1.00 36.62           C
ATOM    252  CG  ARG A  34      17.111  17.421  15.517  1.00 43.02           C
ATOM    253  CD  ARG A  34      16.639  16.976  16.883  1.00 43.26           C
ATOM    254  NE  ARG A  34      15.210  16.692  16.935  1.00 41.07           N
ATOM    255  CZ  ARG A  34      14.483  16.790  18.040  1.00 40.15           C
ATOM    256  NH1 ARG A  34      15.055  17.156  19.176  1.00 40.05           N
ATOM    257  NH2 ARG A  34      13.182  16.560  18.004  1.00 38.40           N
ATOM    258  N   THR A  35      21.286  16.891  15.722  1.00 39.34           N
ATOM    259  CA  THR A  35      22.561  16.814  15.021  1.00 39.88           C
ATOM    260  C   THR A  35      22.268  16.906  13.522  1.00 40.93           C
ATOM    261  O   THR A  35      21.107  16.840  13.108  1.00 41.06           O
ATOM    262  CB  THR A  35      23.295  15.492  15.315  1.00 37.28           C
ATOM    263  OG1 THR A  35      22.505  14.390  14.851  1.00 39.72           O
ATOM    264  CG2 THR A  35      23.553  15.347  16.799  1.00 33.47           C
ATOM    265  N   ARG A  36      23.316  17.067  12.713  1.00 41.22           N
ATOM    266  CA  ARG A  36      23.150  17.170  11.263  1.00 40.45           C
ATOM    267  C   ARG A  36      22.514  15.901  10.700  1.00 40.79           C
ATOM    268  O   ARG A  36      21.789  15.937   9.686  1.00 41.30           O
ATOM    269  CB  ARG A  36      24.494  17.410  10.585  1.00 40.81           C
ATOM    270  CG  ARG A  36      24.392  17.332   9.071  1.00 43.89           C
ATOM    271  CD  ARG A  36      25.777  17.139   8.462  1.00 45.83           C
ATOM    272  NE  ARG A  36      26.619  18.322   8.611  1.00 41.89           N
ATOM    273  CZ  ARG A  36      26.729  19.276   7.685  1.00 43.10           C
ATOM    274  NH1 ARG A  36      26.028  19.185   6.548  1.00 42.99           N
ATOM    275  NH2 ARG A  36      27.599  20.269   7.842  1.00 42.79           N
ATOM    276  N   ASP A  37      22.794  14.767  11.346  1.00 43.22           N
ATOM    277  CA  ASP A  37      22.208  13.493  10.910  1.00 45.76           C
ATOM    278  C   ASP A  37      20.751  13.369  11.304  1.00 43.44           C
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ATOM    279  O   ASP A  37      19.992  12.645  10.631  1.00 44.61           O
ATOM    280  CB  ASP A  37      22.994  12.319  11.484  1.00 53.52           C
ATOM    281  CG  ASP A  37      24.402  12.244  10.911  1.00 61.50           C
ATOM    282  OD1 ASP A  37      24.549  12.480   9.656  1.00 63.84           O
ATOM    283  OD2 ASP A  37      25.362  12.000  11.714  1.00 65.56           O
ATOM    284  N   GLU A  38      20.356  14.036  12.387  1.00 41.47           N
ATOM    285  CA  GLU A  38      18.974  14.010  12.834  1.00 39.44           C
ATOM    286  C   GLU A  38      18.136  15.023  12.048  1.00 40.40           C
ATOM    287  O   GLU A  38      16.958  14.785  11.760  1.00 40.80           O
ATOM    288  CB  GLU A  38      18.883  14.337  14.317  1.00 40.92           C
ATOM    289  CG  GLU A  38      19.534  13.328  15.223  1.00 46.92           C
ATOM    290  CD  GLU A  38      19.369  13.697  16.679  1.00 50.62           C
ATOM    291  OE1 GLU A  38      18.353  13.296  17.276  1.00 54.72           O
ATOM    292  OE2 GLU A  38      20.238  14.406  17.226  1.00 54.70           O
ATOM    293  N   LEU A  39      18.754  16.150  11.696  1.00 37.00           N
ATOM    294  CA  LEU A  39      18.054  17.192  10.966  1.00 32.52           C
ATOM    295  C   LEU A  39      18.992  17.960  10.047  1.00 31.79           C
ATOM    296  O   LEU A  39      19.871  18.687  10.502  1.00 30.32           O
ATOM    297  CB  LEU A  39      17.379  18.157  11.949  1.00 29.99           C
ATOM    298  CG  LEU A  39      16.615  19.368  11.400  1.00 29.67           C
ATOM    299  CD1 LEU A  39      15.371  18.928  10.669  1.00 27.65           C
ATOM    300  CD2 LEU A  39      16.255  20.306  12.533  1.00 28.61           C
ATOM    301  N   ASN A  40      18.833  17.755   8.747  1.00 32.66           N
ATOM    302  CA  ASN A  40      19.642  18.468   7.775  1.00 32.42           C
ATOM    303  C   ASN A  40      18.978  19.825   7.545  1.00 30.60           C
ATOM    304  O   ASN A  40      17.899  19.908   6.949  1.00 28.46           O
ATOM    305  CB  ASN A  40      19.726  17.691   6.465  1.00 34.33           C
ATOM    306  CG  ASN A  40      20.550  18.411   5.423  1.00 38.78           C
ATOM    307  OD1 ASN A  40      21.311  19.330   5.742  1.00 36.89           O
ATOM    308  ND2 ASN A  40      20.393  18.012   4.164  1.00 40.62           N
ATOM    309  N   LEU A  41      19.638  20.881   8.011  1.00 29.38           N
ATOM    310  CA  LEU A  41      19.129  22.245   7.902  1.00 26.76           C
ATOM    311  C   LEU A  41      18.984  22.788   6.486  1.00 25.30           C
ATOM    312  O   LEU A  41      18.339  23.808   6.275  1.00 23.63           O
ATOM    313  CB  LEU A  41      19.972  23.187   8.763  1.00 22.95           C
ATOM    314  CG  LEU A  41      19.982  22.850  10.256  1.00 23.40           C
ATOM    315  CD1 LEU A  41      20.890  23.791  10.994  1.00 23.36           C
ATOM    316  CD2 LEU A  41      18.585  22.937  10.825  1.00 23.16           C
ATOM    317  N   LEU A  42      19.560  22.096   5.510  1.00 27.05           N
ATOM    318  CA  LEU A  42      19.454  22.522   4.114  1.00 30.49           C
ATOM    319  C   LEU A  42      18.129  22.075   3.502  1.00 32.85           C
ATOM    320  O   LEU A  42      17.715  22.572   2.451  1.00 33.73           O
ATOM    321  CB  LEU A  42      20.604  21.954   3.283  1.00 28.79           C
ATOM    322  CG  LEU A  42      22.006  22.451   3.615  1.00 33.56           C
ATOM    323  CD1 LEU A  42      23.011  21.830   2.672  1.00 33.63           C
ATOM    324  CD2 LEU A  42      22.030  23.956   3.483  1.00 34.71           C
ATOM    325  N   ASP A  43      17.480  21.124   4.167  1.00 34.26           N
ATOM    326  CA  ASP A  43      16.205  20.581   3.715  1.00 35.53           C
ATOM    327  C   ASP A  43      15.028  21.380   4.295  1.00 33.52           C
ATOM    328  O   ASP A  43      14.714  21.251   5.481  1.00 32.16           O
ATOM    329  CB  ASP A  43      16.113  19.108   4.143  1.00 39.69           C
ATOM    330  CG  ASP A  43      14.958  18.344   3.477  1.00 40.84           C
ATOM    331  OD1 ASP A  43      14.136  18.921   2.723  1.00 41.94           O
ATOM    332  OD2 ASP A  43      14.886  17.126   3.717  1.00 43.40           O
ATOM    333  N   SER A  44      14.363  22.164   3.441  1.00 32.69           N
ATOM    334  CA  SER A  44      13.210  22.983   3.842  1.00 34.65           C
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ATOM    335  C   SER A  44      12.104  22.184   4.534  1.00 32.14           C
ATOM    336  O   SER A  44      11.693  22.538   5.637  1.00 32.99           O
ATOM    337  CB  SER A  44      12.606  23.703   2.632  1.00 34.63           C
ATOM    338  OG  SER A  44      13.570  24.483   1.956  1.00 45.59           O
ATOM    339  N   ARG A  45      11.626  21.123   3.873  1.00 31.45           N
ATOM    340  CA  ARG A  45      10.558  20.259   4.400  1.00 31.71           C
ATOM    341  C   ARG A  45      10.927  19.695   5.770  1.00 29.48           C
ATOM    342  O   ARG A  45      10.145  19.779   6.712  1.00 31.13           O
ATOM    343  CB  ARG A  45      10.239  19.120   3.405  1.00 28.75           C
ATOM    344  N   ALA A  46      12.151  19.190   5.890  1.00 29.28           N
ATOM    345  CA  ALA A  46      12.638  18.638   7.147  1.00 28.44           C
ATOM    346  C   ALA A  46      12.593  19.701   8.241  1.00 29.87           C
ATOM    347  O   ALA A  46      12.109  19.448   9.351  1.00 32.21           O
ATOM    348  CB  ALA A  46      14.056  18.125   6.975  1.00 28.03           C
ATOM    349  N   VAL A  47      13.073  20.900   7.913  1.00 29.43           N
ATOM    350  CA  VAL A  47      13.092  22.011   8.868  1.00 28.97           C
ATOM    351  C   VAL A  47      11.679  22.458   9.279  1.00 30.28           C
ATOM    352  O   VAL A  47      11.414  22.666  10.465  1.00 28.91           O
ATOM    353  CB  VAL A  47      13.917  23.217   8.319  1.00 27.52           C
ATOM    354  CG1 VAL A  47      13.905  24.389   9.305  1.00 24.49           C
ATOM    355  CG2 VAL A  47      15.347  22.785   8.061  1.00 22.11           C
ATOM    356  N   HIS A  48      10.777  22.603   8.308  1.00 31.17           N
ATOM    357  CA  HIS A  48       9.405  23.010   8.613  1.00 34.04           C
ATOM    358  C   HIS A  48       8.693  21.939   9.435  1.00 34.25           C
ATOM    359  O   HIS A  48       7.948  22.258  10.357  1.00 34.13           O
ATOM    360  CB  HIS A  48       8.634  23.345   7.332  1.00 33.07           C
ATOM    361  CG  HIS A  48       8.975  24.693   6.763  1.00 41.08           C
ATOM    362  ND1 HIS A  48      10.154  24.947   6.096  1.00 41.25           N
ATOM    363  CD2 HIS A  48       8.297  25.866   6.784  1.00 42.73           C
ATOM    364  CE1 HIS A  48      10.189  26.217   5.731  1.00 38.92           C
ATOM    365  NE2 HIS A  48       9.075  26.797   6.137  1.00 38.73           N
ATOM    366  N   ASP A  49       8.970  20.670   9.133  1.00 37.03           N
ATOM    367  CA  ASP A  49       8.373  19.560   9.866  1.00 36.26           C
ATOM    368  C   ASP A  49       8.811  19.581  11.314  1.00 36.70           C
ATOM    369  O   ASP A  49       7.998  19.369  12.215  1.00 38.51           O
ATOM    370  CB  ASP A  49       8.754  18.226   9.239  1.00 41.07           C
ATOM    371  CG  ASP A  49       7.932  17.906   8.006  1.00 47.20           C
ATOM    372  OD1 ASP A  49       6.981  18.665   7.701  1.00 49.28           O
ATOM    373  OD2 ASP A  49       8.239  16.892   7.340  1.00 50.40           O
ATOM    374  N   PHE A  50      10.099  19.835  11.528  1.00 31.65           N
ATOM    375  CA  PHE A  50      10.655  19.911  12.866  1.00 30.48           C
ATOM    376  C   PHE A  50       9.999  21.054  13.655  1.00 31.59           C
ATOM    377  O   PHE A  50       9.603  20.870  14.800  1.00 34.67           O
ATOM    378  CB  PHE A  50      12.181  20.095  12.787  1.00 27.87           C
ATOM    379  CG  PHE A  50      12.803  20.619  14.054  1.00 31.67           C
ATOM    380  CD1 PHE A  50      13.067  19.767  15.127  1.00 34.11           C
ATOM    381  CD2 PHE A  50      13.094  21.978  14.194  1.00 32.79           C
ATOM    382  CE1 PHE A  50      13.612  20.265  16.327  1.00 33.70           C
ATOM    383  CE2 PHE A  50      13.635  22.486  15.387  1.00 33.68           C
ATOM    384  CZ  PHE A  50      13.893  21.628  16.452  1.00 33.53           C
ATOM    385  N   PHE A  51       9.868  22.226  13.039  1.00 33.60           N
ATOM    386  CA  PHE A  51       9.269  23.375  13.719  1.00 33.81           C
ATOM    387  C   PHE A  51       7.783  23.186  14.001  1.00 35.57           C
ATOM    388  O   PHE A  51       7.230  23.778  14.938  1.00 33.66           O
ATOM    389  CB  PHE A  51       9.514  24.664  12.931  1.00 31.59           C
ATOM    390  CG  PHE A  51      10.805  25.363  13.290  1.00 30.83           C
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ATOM    391  CD1 PHE A  51      10.861  26.230  14.377  1.00 28.76           C
ATOM    392  CD2 PHE A  51      11.962  25.157  12.540  1.00 29.97           C
ATOM    393  CE1 PHE A  51      12.050  26.882  14.713  1.00 31.23           C
ATOM    394  CE2 PHE A  51      13.158  25.807  12.869  1.00 30.53           C
ATOM    395  CZ  PHE A  51      13.201  26.669  13.956  1.00 26.55           C
ATOM    396  N   ALA A  52       7.146  22.351  13.186  1.00 38.02           N
ATOM    397  CA  ALA A  52       5.726  22.039  13.338  1.00 40.36           C
ATOM    398  C   ALA A  52       5.503  21.012  14.457  1.00 41.45           C
ATOM    399  O   ALA A  52       4.532  21.116  15.209  1.00 43.43           O
ATOM    400  CB  ALA A  52       5.153  21.518  12.019  1.00 34.47           C
ATOM    401  N   SER A  53       6.424  20.053  14.580  1.00 42.38           N
ATOM    402  CA  SER A  53       6.342  18.994  15.588  1.00 41.18           C
ATOM    403  C   SER A  53       6.748  19.407  16.986  1.00 42.82           C
ATOM    404  O   SER A  53       6.172  18.925  17.952  1.00 47.99           O
ATOM    405  CB  SER A  53       7.193  17.804  15.178  1.00 40.80           C
ATOM    406  OG  SER A  53       6.823  17.356  13.892  1.00 49.20           O
ATOM    407  N   GLU A  54       7.786  20.229  17.098  1.00 43.27           N
ATOM    408  CA  GLU A  54       8.263  20.687  18.399  1.00 44.91           C
ATOM    409  C   GLU A  54       7.630  22.013  18.777  1.00 45.75           C
ATOM    410  O   GLU A  54       7.059  22.701  17.931  1.00 50.32           O
ATOM    411  CB  GLU A  54       9.783  20.834  18.393  1.00 48.02           C
ATOM    412  CG  GLU A  54      10.534  19.556  18.061  1.00 51.83           C
ATOM    413  CD  GLU A  54      10.220  18.417  19.016  1.00 56.09           C
ATOM    414  OE1 GLU A  54      10.266  18.624  20.249  1.00 51.48           O
ATOM    415  OE2 GLU A  54       9.925  17.308  18.524  1.00 61.02           O
ATOM    416  N   ARG A  55       7.703  22.361  20.054  1.00 45.00           N
ATOM    417  CA  ARG A  55       7.137  23.624  20.506  1.00 46.27           C
ATOM    418  C   ARG A  55       8.313  24.510  20.899  1.00 45.54           C
ATOM    419  O   ARG A  55       8.727  24.529  22.054  1.00 50.04           O
ATOM    420  CB  ARG A  55       6.183  23.401  21.692  1.00 47.08           C
ATOM    421  N   ILE A  56       8.858  25.223  19.915  1.00 41.10           N
ATOM    422  CA  ILE A  56      10.015  26.097  20.107  1.00 34.43           C
ATOM    423  C   ILE A  56       9.630  27.518  20.515  1.00 31.44           C
ATOM    424  O   ILE A  56       8.801  28.155  19.870  1.00 34.34           O
ATOM    425  CB  ILE A  56      10.870  26.191  18.806  1.00 33.12           C
ATOM    426  CG1 ILE A  56      11.152  24.800  18.207  1.00 33.26           C
ATOM    427  CG2 ILE A  56      12.162  26.937  19.081  1.00 31.88           C
ATOM    428  CD1 ILE A  56      11.967  23.893  19.085  1.00 33.72           C
ATOM    429  N   ASP A  57      10.257  28.026  21.568  1.00 28.13           N
ATOM    430  CA  ASP A  57       9.982  29.385  22.019  1.00 30.48           C
ATOM    431  C   ASP A  57      11.059  30.351  21.524  1.00 30.91           C
ATOM    432  O   ASP A  57      10.755  31.484  21.174  1.00 30.50           O
ATOM    433  CB  ASP A  57       9.867  29.454  23.550  1.00 30.93           C
ATOM    434  CG  ASP A  57       8.715  28.620  24.087  1.00 34.60           C
ATOM    435  OD1 ASP A  57       7.548  28.922  23.761  1.00 41.17           O
ATOM    436  OD2 ASP A  57       8.972  27.648  24.824  1.00 35.23           O
ATOM    437  N   GLN A  58      12.309  29.889  21.476  1.00 29.46           N
ATOM    438  CA  GLN A  58      13.435  30.713  21.032  1.00 26.46           C
ATOM    439  C   GLN A  58      14.360  29.920  20.130  1.00 25.90           C
ATOM    440  O   GLN A  58      14.417  28.694  20.222  1.00 25.40           O
ATOM    441  CB  GLN A  58      14.248  31.211  22.227  1.00 26.27           C
ATOM    442  CG  GLN A  58      13.485  32.059  23.221  1.00 30.99           C
ATOM    443  CD  GLN A  58      14.345  32.492  24.385  1.00 35.42           C
ATOM    444  OE1 GLN A  58      15.563  32.305  24.379  1.00 39.47           O
ATOM    445  NE2 GLN A  58      13.721  33.088  25.387  1.00 35.19           N
ATOM    446  N   VAL A  59      15.077  30.629  19.260  1.00 23.53           N
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ATOM    447  CA  VAL A  59      16.028  30.011  18.338  1.00 19.83           C
ATOM    448  C   VAL A  59      17.356  30.774  18.299  1.00 21.62           C
ATOM    449  O   VAL A  59      17.380  32.008  18.180  1.00 20.82           O
ATOM    450  CB  VAL A  59      15.487  29.977  16.889  1.00 19.02           C
ATOM    451  CG1 VAL A  59      16.564  29.466  15.921  1.00 18.14           C
ATOM    452  CG2 VAL A  59      14.255  29.110  16.797  1.00 18.15           C
ATOM    453  N   TYR A  60      18.451  30.043  18.485  1.00 21.34           N
ATOM    454  CA  TYR A  60      19.788  30.619  18.386  1.00 20.10           C
ATOM    455  C   TYR A  60      20.324  30.016  17.102  1.00 18.62           C
ATOM    456  O   TYR A  60      20.582  28.817  17.038  1.00 19.19           O
ATOM    457  CB  TYR A  60      20.677  30.224  19.562  1.00 20.05           C
ATOM    458  CG  TYR A  60      20.440  31.033  20.811  1.00 19.50           C
ATOM    459  CD1 TYR A  60      19.437  30.677  21.709  1.00 24.78           C
ATOM    460  CD2 TYR A  60      21.234  32.138  21.115  1.00 20.63           C
ATOM    461  CE1 TYR A  60      19.224  31.399  22.881  1.00 23.69           C
ATOM    462  CE2 TYR A  60      21.035  32.868  22.290  1.00 21.28           C
ATOM    463  CZ  TYR A  60      20.022  32.490  23.167  1.00 24.58           C
ATOM    464  OH  TYR A  60      19.787  33.204  24.323  1.00 25.10           O
ATOM    465  N   LEU A  61      20.409  30.835  16.059  1.00 20.28           N
ATOM    466  CA  LEU A  61      20.882  30.376  14.757  1.00 23.69           C
ATOM    467  C   LEU A  61      22.407  30.421  14.688  1.00 21.61           C
ATOM    468  O   LEU A  61      22.997  31.398  14.214  1.00 21.00           O
ATOM    469  CB  LEU A  61      20.211  31.207  13.641  1.00 21.87           C
ATOM    470  CG  LEU A  61      20.425  30.877  12.157  1.00 28.27           C
ATOM    471  CD1 LEU A  61      20.833  29.433  11.955  1.00 30.54           C
ATOM    472  CD2 LEU A  61      19.170  31.221  11.351  1.00 21.23           C
ATOM    473  N   ALA A  62      23.031  29.357  15.198  1.00 20.69           N
ATOM    474  CA  ALA A  62      24.494  29.229  15.231  1.00 21.09           C
ATOM    475  C   ALA A  62      25.024  28.217  14.214  1.00 21.30           C
ATOM    476  O   ALA A  62      26.197  27.861  14.241  1.00 24.79           O
ATOM    477  CB  ALA A  62      24.973  28.870  16.639  1.00 13.23           C
ATOM    478  N   ALA A  63      24.152  27.738  13.335  1.00 20.79           N
ATOM    479  CA  ALA A  63      24.556  26.797  12.297  1.00 24.19           C
ATOM    480  C   ALA A  63      25.030  27.582  11.074  1.00 23.98           C
ATOM    481  O   ALA A  63      24.412  28.574  10.679  1.00 24.88           O
ATOM    482  CB  ALA A  63      23.394  25.882  11.912  1.00 18.90           C
ATOM    483  N   ALA A  64      26.120  27.121  10.471  1.00 22.11           N
ATOM    484  CA  ALA A  64      26.687  27.760   9.294  1.00 22.13           C
ATOM    485  C   ALA A  64      27.793  26.927   8.673  1.00 24.40           C
ATOM    486  O   ALA A  64      28.284  25.965   9.266  1.00 23.16           O
ATOM    487  CB  ALA A  64      27.230  29.146   9.656  1.00 16.74           C
ATOM    488  N   LYS A  65      28.126  27.279   7.437  1.00 24.29           N
ATOM    489  CA  LYS A  65      29.198  26.658   6.681  1.00 25.21           C
ATOM    490  C   LYS A  65      30.318  27.675   6.848  1.00 26.03           C
ATOM    491  O   LYS A  65      30.287  28.743   6.248  1.00 25.99           O
ATOM    492  CB  LYS A  65      28.812  26.514   5.206  1.00 28.28           C
ATOM    493  CG  LYS A  65      29.956  26.182   4.262  1.00 32.11           C
ATOM    494  CD  LYS A  65      30.421  24.768   4.436  1.00 33.93           C
ATOM    495  CE  LYS A  65      31.413  24.431   3.352  1.00 37.43           C
ATOM    496  NZ  LYS A  65      31.724  22.987   3.337  1.00 43.68           N
ATOM    497  N   VAL A  66      31.245  27.364   7.752  1.00 28.19           N
ATOM    498  CA  VAL A  66      32.385  28.223   8.095  1.00 26.36           C
ATOM    499  C   VAL A  66      33.740  27.643   7.649  1.00 27.04           C
ATOM    500  O   VAL A  66      33.904  26.436   7.553  1.00 30.28           O
ATOM    501  CB  VAL A  66      32.390  28.449   9.617  1.00 25.74           C
ATOM    502  CG1 VAL A  66      33.577  29.276  10.040  1.00 34.01           C
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ATOM    503  CG2 VAL A  66      31.096  29.124  10.030  1.00 26.90           C
ATOM    504  N   GLY A  67      34.703  28.516   7.379  1.00 25.30           N
ATOM    505  CA  GLY A  67      36.006  28.056   6.949  1.00 26.51           C
ATOM    506  C   GLY A  67      37.043  29.162   6.938  1.00 28.34           C
ATOM    507  O   GLY A  67      36.751  30.309   7.282  1.00 28.11           O
ATOM    508  N   GLY A  68      38.270  28.787   6.573  1.00 27.43           N
ATOM    509  CA  GLY A  68      39.371  29.725   6.505  1.00 23.64           C
ATOM    510  C   GLY A  68      39.565  30.287   5.111  1.00 22.82           C
ATOM    511  O   GLY A  68      38.765  30.042   4.219  1.00 26.25           O
ATOM    512  N   ILE A  69      40.655  31.024   4.925  1.00 25.72           N
ATOM    513  CA  ILE A  69      41.012  31.658   3.662  1.00 24.89           C
ATOM    514  C   ILE A  69      40.979  30.732   2.442  1.00 22.61           C
ATOM    515  O   ILE A  69      40.371  31.066   1.427  1.00 22.34           O
ATOM    516  CB  ILE A  69      42.377  32.371   3.818  1.00 30.00           C
ATOM    517  CG1 ILE A  69      42.183  33.595   4.715  1.00 31.07           C
ATOM    518  CG2 ILE A  69      42.952  32.773   2.476  1.00 31.20           C
ATOM    519  CD1 ILE A  69      43.460  34.277   5.135  1.00 40.18           C
ATOM    520  N   VAL A  70      41.589  29.557   2.557  1.00 23.14           N
ATOM    521  CA  VAL A  70      41.610  28.584   1.459  1.00 22.04           C
ATOM    522  C   VAL A  70      40.196  28.067   1.129  1.00 23.01           C
ATOM    523  O   VAL A  70      39.782  28.056  -0.036  1.00 22.01           O
ATOM    524  CB  VAL A  70      42.564  27.377   1.780  1.00 20.23           C
ATOM    525  CG1 VAL A  70      42.474  26.290   0.694  1.00 16.38           C
ATOM    526  CG2 VAL A  70      44.001  27.862   1.894  1.00 17.14           C
ATOM    527  N   ALA A  71      39.450  27.686   2.164  1.00 19.81           N
ATOM    528  CA  ALA A  71      38.103  27.157   1.984  1.00 21.25           C
ATOM    529  C   ALA A  71      37.166  28.139   1.274  1.00 20.54           C
ATOM    530  O   ALA A  71      36.507  27.785   0.291  1.00 24.36           O
ATOM    531  CB  ALA A  71      37.525  26.732   3.334  1.00 18.71           C
ATOM    532  N   ASN A  72      37.144  29.378   1.754  1.00 20.84           N
ATOM    533  CA  ASN A  72      36.297  30.422   1.176  1.00 22.51           C
ATOM    534  C   ASN A  72      36.603  30.743  -0.277  1.00 21.99           C
ATOM    535  O   ASN A  72      35.703  31.111  -1.020  1.00 25.71           O
ATOM    536  CB  ASN A  72      36.357  31.695   2.020  1.00 23.31           C
ATOM    537  CG  ASN A  72      35.495  31.608   3.268  1.00 25.17           C
ATOM    538  OD1 ASN A  72      35.952  31.179   4.331  1.00 27.44           O
ATOM    539  ND2 ASN A  72      34.241  32.016   3.144  1.00 22.39           N
ATOM    540  N   ASN A  73      37.870  30.628  -0.675  1.00 21.11           N
ATOM    541  CA  ASN A  73      38.258  30.883  -2.062  1.00 20.84           C
ATOM    542  C   ASN A  73      38.146  29.633  -2.935  1.00 21.79           C
ATOM    543  O   ASN A  73      38.059  29.730  -4.159  1.00 24.98           O
ATOM    544  CB  ASN A  73      39.687  31.403  -2.137  1.00 20.70           C
ATOM    545  CG  ASN A  73      39.795  32.881  -1.833  1.00 23.84           C
ATOM    546  OD1 ASN A  73      39.264  33.726  -2.566  1.00 26.45           O
ATOM    547  ND2 ASN A  73      40.517  33.210  -0.761  1.00 23.01           N
ATOM    548  N   THR A  74      38.182  28.463  -2.305  1.00 20.74           N
ATOM    549  CA  THR A  74      38.096  27.193  -3.028  1.00 21.46           C
ATOM    550  C   THR A  74      36.655  26.711  -3.236  1.00 21.04           C
ATOM    551  O   THR A  74      36.322  26.193  -4.301  1.00 18.01           O
ATOM    552  CB  THR A  74      38.912  26.094  -2.310  1.00 22.88           C
ATOM    553  OG1 THR A  74      40.258  26.550  -2.143  1.00 20.75           O
ATOM    554  CG2 THR A  74      38.908  24.791  -3.113  1.00 19.72           C
ATOM    555  N   TYR A  75      35.796  26.922  -2.237  1.00 21.00           N
ATOM    556  CA  TYR A  75      34.397  26.499  -2.325  1.00 20.99           C
ATOM    557  C   TYR A  75      33.414  27.670  -2.179  1.00 20.75           C
ATOM    558  O   TYR A  75      32.477  27.593  -1.388  1.00 21.89           O
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ATOM    559  CB  TYR A  75      34.103  25.473  -1.224  1.00 22.51           C
ATOM    560  CG  TYR A  75      35.128  24.372  -1.102  1.00 25.35           C
ATOM    561  CD1 TYR A  75      35.091  23.263  -1.947  1.00 27.72           C
ATOM    562  CD2 TYR A  75      36.137  24.440  -0.146  1.00 27.31           C
ATOM    563  CE1 TYR A  75      36.034  22.244  -1.845  1.00 30.92           C
ATOM    564  CE2 TYR A  75      37.088  23.425  -0.033  1.00 30.18           C
ATOM    565  CZ  TYR A  75      37.027  22.332  -0.885  1.00 33.55           C
ATOM    566  OH  TYR A  75      37.946  21.318  -0.775  1.00 38.78           O
ATOM    567  N   PRO A  76      33.587  28.750  -2.958  1.00 18.60           N
ATOM    568  CA  PRO A  76      32.668  29.887  -2.838  1.00 16.60           C
ATOM    569  C   PRO A  76      31.170  29.569  -2.996  1.00 17.23           C
ATOM    570  O   PRO A  76      30.348  30.056  -2.210  1.00 19.43           O
ATOM    571  CB  PRO A  76      33.193  30.864  -3.898  1.00 18.79           C
ATOM    572  CG  PRO A  76      33.874  29.975  -4.903  1.00 18.85           C
ATOM    573  CD  PRO A  76      34.591  29.003  -4.009  1.00 17.13           C
ATOM    574  N   ALA A  77      30.814  28.765  -3.998  1.00 17.35           N
ATOM    575  CA  ALA A  77      29.420  28.376  -4.205  1.00 17.77           C
ATOM    576  C   ALA A  77      28.808  27.684  -2.974  1.00 20.30           C
ATOM    577  O   ALA A  77      27.690  28.006  -2.578  1.00 22.25           O
ATOM    578  CB  ALA A  77      29.302  27.493  -5.403  1.00 15.82           C
ATOM    579  N   ASP A  78      29.548  26.768  -2.350  1.00 20.44           N
ATOM    580  CA  ASP A  78      29.057  26.062  -1.163  1.00 20.70           C
ATOM    581  C   ASP A  78      28.806  27.018  -0.011  1.00 20.38           C
ATOM    582  O   ASP A  78      27.859  26.847   0.752  1.00 19.14           O
ATOM    583  CB  ASP A  78      30.064  25.014  -0.674  1.00 22.48           C
ATOM    584  CG  ASP A  78      30.332  23.919  -1.691  1.00 27.38           C
ATOM    585  OD1 ASP A  78      29.670  23.874  -2.757  1.00 28.69           O
ATOM    586  OD2 ASP A  78      31.228  23.092  -1.413  1.00 32.93           O
ATOM    587  N   PHE A  79      29.699  27.992   0.135  1.00 20.45           N
ATOM    588  CA  PHE A  79      29.608  28.979   1.206  1.00 22.62           C
ATOM    589  C   PHE A  79      28.444  29.950   1.080  1.00 21.98           C
ATOM    590  O   PHE A  79      27.789  30.254   2.076  1.00 23.46           O
ATOM    591  CB  PHE A  79      30.927  29.736   1.368  1.00 22.85           C
ATOM    592  CG  PHE A  79      31.955  28.987   2.172  1.00 23.24           C
ATOM    593  CD1 PHE A  79      32.809  28.079   1.565  1.00 22.28           C
ATOM    594  CD2 PHE A  79      32.072  29.199   3.540  1.00 22.11           C
ATOM    595  CE1 PHE A  79      33.763  27.394   2.312  1.00 22.89           C
ATOM    596  CE2 PHE A  79      33.023  28.520   4.291  1.00 21.46           C
ATOM    597  CZ  PHE A  79      33.870  27.616   3.677  1.00 18.34           C
ATOM    598  N   ILE A  80      28.188  30.458  -0.122  1.00 17.01           N
ATOM    599  CA  ILE A  80      27.057  31.354  -0.271  1.00 17.16           C
ATOM    600  C   ILE A  80      25.734  30.557  -0.268  1.00 17.59           C
ATOM    601  O   ILE A  80      24.801  30.906   0.454  1.00 15.27           O
ATOM    602  CB  ILE A  80      27.171  32.269  -1.531  1.00 17.15           C
ATOM    603  CG1 ILE A  80      26.022  33.295  -1.519  1.00 15.97           C
ATOM    604  CG2 ILE A  80      27.213  31.428  -2.818  1.00 10.30           C
ATOM    605  CD1 ILE A  80      26.121  34.403  -2.553  1.00 14.62           C
ATOM    606  N   TYR A  81      25.684  29.448  -1.007  1.00 16.59           N
ATOM    607  CA  TYR A  81      24.469  28.646  -1.077  1.00 16.53           C
ATOM    608  C   TYR A  81      24.000  28.032   0.234  1.00 17.95           C
ATOM    609  O   TYR A  81      22.848  28.199   0.626  1.00 20.44           O
ATOM    610  CB  TYR A  81      24.586  27.545  -2.130  1.00 16.48           C
ATOM    611  CG  TYR A  81      23.375  26.629  -2.152  1.00 21.92           C
ATOM    612  CD1 TYR A  81      22.217  26.993  -2.841  1.00 21.06           C
ATOM    613  CD2 TYR A  81      23.367  25.416  -1.443  1.00 21.92           C
ATOM    614  CE1 TYR A  81      21.085  26.188  -2.827  1.00 20.40           C
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ATOM    615  CE2 TYR A  81      22.229  24.598  -1.423  1.00 22.42           C
ATOM    616  CZ  TYR A  81      21.095  24.997  -2.121  1.00 20.93           C
ATOM    617  OH  TYR A  81      19.968  24.213  -2.120  1.00 27.29           O
ATOM    618  N   GLN A  82      24.879  27.297   0.896  1.00 17.27           N
ATOM    619  CA  GLN A  82      24.512  26.635   2.139  1.00 18.48           C
ATOM    620  C   GLN A  82      24.118  27.591   3.238  1.00 19.52           C
ATOM    621  O   GLN A  82      23.222  27.295   4.021  1.00 21.45           O
ATOM    622  CB  GLN A  82      25.625  25.697   2.611  1.00 20.06           C
ATOM    623  CG  GLN A  82      25.739  24.443   1.761  1.00 19.94           C
ATOM    624  CD  GLN A  82      26.926  23.588   2.125  1.00 20.90           C
ATOM    625  OE1 GLN A  82      27.575  23.021   1.256  1.00 27.31           O
ATOM    626  NE2 GLN A  82      27.222  23.497   3.407  1.00 20.61           N
ATOM    627  N   ASN A  83      24.793  28.730   3.320  1.00 18.42           N
ATOM    628  CA  ASN A  83      24.439  29.695   4.345  1.00 16.95           C
ATOM    629  C   ASN A  83      23.114  30.382   4.024  1.00 18.39           C
ATOM    630  O   ASN A  83      22.293  30.593   4.923  1.00 20.25           O
ATOM    631  CB  ASN A  83      25.578  30.671   4.612  1.00 16.28           C
ATOM    632  CG  ASN A  83      26.707  30.019   5.405  1.00 25.04           C
ATOM    633  OD1 ASN A  83      26.515  29.607   6.552  1.00 25.51           O
ATOM    634  ND2 ASN A  83      27.871  29.872   4.780  1.00 23.34           N
ATOM    635  N   MET A  84      22.870  30.658   2.742  1.00 18.90           N
ATOM    636  CA  MET A  84      21.609  31.266   2.335  1.00 20.07           C
ATOM    637  C   MET A  84      20.450  30.314   2.656  1.00 19.78           C
ATOM    638  O   MET A  84      19.469  30.732   3.267  1.00 20.03           O
ATOM    639  CB  MET A  84      21.614  31.610   0.850  1.00 18.82           C
ATOM    640  CG  MET A  84      22.160  33.005   0.526  1.00 19.79           C
ATOM    641  SD  MET A  84      22.231  33.287  -1.266  1.00 24.22           S
ATOM    642  CE  MET A  84      20.512  33.344  -1.713  1.00 18.46           C
ATOM    643  N   MET A  85      20.590  29.031   2.306  1.00 19.18           N
ATOM    644  CA  MET A  85      19.535  28.045   2.573  1.00 20.30           C
ATOM    645  C   MET A  85      19.279  27.817   4.047  1.00 20.01           C
ATOM    646  O   MET A  85      18.129  27.825   4.461  1.00 21.88           O
ATOM    647  CB  MET A  85      19.811  26.708   1.891  1.00 19.65           C
ATOM    648  CG  MET A  85      19.527  26.725   0.404  1.00 31.00           C
ATOM    649  SD  MET A  85      17.786  26.989  -0.022  1.00 36.83           S
ATOM    650  CE  MET A  85      17.068  25.555   0.714  1.00 26.89           C
ATOM    651  N   ILE A  86      20.337  27.620   4.836  1.00 19.40           N
ATOM    652  CA  ILE A  86      20.194  27.405   6.278  1.00 19.53           C
ATOM    653  C   ILE A  86      19.450  28.577   6.938  1.00 21.60           C
ATOM    654  O   ILE A  86      18.549  28.368   7.752  1.00 21.92           O
ATOM    655  CB  ILE A  86      21.567  27.192   6.968  1.00 19.74           C
ATOM    656  CG1 ILE A  86      22.208  25.891   6.481  1.00 19.89           C
ATOM    657  CG2 ILE A  86      21.408  27.147   8.498  1.00 15.03           C
ATOM    658  CD1 ILE A  86      23.625  25.688   6.992  1.00 18.88           C
ATOM    659  N   GLU A  87      19.820  29.804   6.572  1.00 21.72           N
ATOM    660  CA  GLU A  87      19.173  31.011   7.104  1.00 23.30           C
ATOM    661  C   GLU A  87      17.690  31.084   6.719  1.00 22.73           C
ATOM    662  O   GLU A  87      16.835  31.264   7.578  1.00 24.21           O
ATOM    663  CB  GLU A  87      19.869  32.260   6.563  1.00 22.51           C
ATOM    664  CG  GLU A  87      21.167  32.573   7.242  1.00 24.89           C
ATOM    665  CD  GLU A  87      22.066  33.452   6.399  1.00 23.90           C
ATOM    666  OE1 GLU A  87      21.593  34.031   5.391  1.00 20.05           O
ATOM    667  OE2 GLU A  87      23.265  33.525   6.743  1.00 27.05           O
ATOM    668  N   SER A  88      17.418  30.966   5.417  1.00 23.72           N
ATOM    669  CA  SER A  88      16.071  31.008   4.851  1.00 25.11           C
ATOM    670  C   SER A  88      15.156  29.964   5.462  1.00 25.76           C
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ATOM    671  O   SER A  88      14.048  30.283   5.890  1.00 25.56           O
ATOM    672  CB  SER A  88      16.124  30.776   3.342  1.00 24.72           C
ATOM    673  OG  SER A  88      16.813  31.829   2.714  1.00 31.36           O
ATOM    674  N   ASN A  89      15.625  28.717   5.494  1.00 25.50           N
ATOM    675  CA  ASN A  89      14.848  27.610   6.042  1.00 23.80           C
ATOM    676  C   ASN A  89      14.454  27.839   7.491  1.00 23.46           C
ATOM    677  O   ASN A  89      13.278  27.795   7.823  1.00 24.35           O
ATOM    678  CB  ASN A  89      15.610  26.288   5.916  1.00 19.57           C
ATOM    679  CG  ASN A  89      15.709  25.799   4.482  1.00 21.14           C
ATOM    680  OD1 ASN A  89      16.474  24.883   4.187  1.00 25.10           O
ATOM    681  ND2 ASN A  89      14.933  26.396   3.589  1.00 18.41           N
ATOM    682  N   ILE A  90      15.436  28.116   8.341  1.00 25.82           N
ATOM    683  CA  ILE A  90      15.175  28.339   9.763  1.00 25.99           C
ATOM    684  C   ILE A  90      14.296  29.559  10.061  1.00 25.71           C
ATOM    685  O   ILE A  90      13.295  29.455  10.777  1.00 28.84           O
ATOM    686  CB  ILE A  90      16.508  28.412  10.576  1.00 23.78           C
ATOM    687  CG1 ILE A  90      17.189  27.037  10.548  1.00 23.41           C
ATOM    688  CG2 ILE A  90      16.253  28.888  12.016  1.00 15.55           C
ATOM    689  CD1 ILE A  90      18.452  26.942  11.372  1.00 24.22           C
ATOM    690  N   ILE A  91      14.672  30.711   9.518  1.00 26.09           N
ATOM    691  CA  ILE A  91      13.922  31.939   9.747  1.00 24.31           C
ATOM    692  C   ILE A  91      12.484  31.866   9.240  1.00 24.33           C
ATOM    693  O   ILE A  91      11.564  32.330   9.914  1.00 25.31           O
ATOM    694  CB  ILE A  91      14.665  33.148   9.139  1.00 21.42           C
ATOM    695  CG1 ILE A  91      15.906  33.449   9.986  1.00 15.68           C
ATOM    696  CG2 ILE A  91      13.734  34.359   9.013  1.00 20.44           C
ATOM    697  CD1 ILE A  91      16.893  34.385   9.322  1.00 15.80           C
ATOM    698  N   HIS A  92      12.285  31.278   8.068  1.00 22.96           N
ATOM    699  CA  HIS A  92      10.943  31.165   7.529  1.00 23.90           C
ATOM    700  C   HIS A  92      10.114  30.160   8.345  1.00 25.84           C
ATOM    701  O   HIS A  92       8.973  30.447   8.719  1.00 27.61           O
ATOM    702  CB  HIS A  92      10.987  30.757   6.065  1.00 21.74           C
ATOM    703  CG  HIS A  92       9.658  30.845   5.383  1.00 28.28           C
ATOM    704  ND1 HIS A  92       8.950  29.731   4.981  1.00 25.58           N
ATOM    705  CD2 HIS A  92       8.912  31.916   5.024  1.00 26.43           C
ATOM    706  CE1 HIS A  92       7.830  30.113   4.397  1.00 25.59           C
ATOM    707  NE2 HIS A  92       7.782  31.434   4.410  1.00 29.98           N
ATOM    708  N   ALA A  93      10.696  28.998   8.640  1.00 23.07           N
ATOM    709  CA  ALA A  93      10.007  27.978   9.427  1.00 23.23           C
ATOM    710  C   ALA A  93       9.627  28.515  10.801  1.00 24.71           C
ATOM    711  O   ALA A  93       8.521  28.276  11.275  1.00 30.29           O
ATOM    712  CB  ALA A  93      10.873  26.737   9.574  1.00 18.63           C
ATOM    713  N   ALA A  94      10.539  29.247  11.437  1.00 24.79           N
ATOM    714  CA  ALA A  94      10.277  29.815  12.751  1.00 24.24           C
ATOM    715  C   ALA A  94       9.034  30.695  12.683  1.00 25.32           C
ATOM    716  O   ALA A  94       8.116  30.552  13.481  1.00 28.35           O
ATOM    717  CB  ALA A  94      11.483  30.622  13.234  1.00 20.61           C
ATOM    718  N   HIS A  95       8.982  31.575  11.693  1.00 25.38           N
ATOM    719  CA  HIS A  95       7.833  32.454  11.553  1.00 25.49           C
ATOM    720  C   HIS A  95       6.530  31.705  11.291  1.00 23.67           C
ATOM    721  O   HIS A  95       5.502  32.033  11.880  1.00 23.13           O
ATOM    722  CB  HIS A  95       8.046  33.471  10.442  1.00 20.17           C
ATOM    723  CG  HIS A  95       6.827  34.288  10.165  1.00 24.94           C
ATOM    724  ND1 HIS A  95       6.053  34.111   9.035  1.00 27.90           N
ATOM    725  CD2 HIS A  95       6.201  35.234  10.906  1.00 19.74           C
ATOM    726  CE1 HIS A  95       5.003  34.912   9.094  1.00 20.03           C
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ATOM    727  NE2 HIS A  95       5.071  35.603  10.219  1.00 23.33           N
ATOM    728  N   GLN A  96       6.574  30.756  10.358  1.00 21.60           N
ATOM    729  CA  GLN A  96       5.421  29.939   9.995  1.00 26.69           C
ATOM    730  C   GLN A  96       4.855  29.192  11.188  1.00 27.38           C
ATOM    731  O   GLN A  96       3.677  28.862  11.202  1.00 31.32           O
ATOM    732  CB  GLN A  96       5.815  28.885   8.972  1.00 28.24           C
ATOM    733  CG  GLN A  96       6.238  29.422   7.652  1.00 43.30           C
ATOM    734  CD  GLN A  96       5.069  29.691   6.734  1.00 50.49           C
ATOM    735  OE1 GLN A  96       4.532  30.808   6.701  1.00 54.42           O
ATOM    736  NE2 GLN A  96       4.677  28.673   5.960  1.00 49.32           N
ATOM    737  N   ASN A  97       5.710  28.879  12.160  1.00 26.05           N
ATOM    738  CA  ASN A  97       5.297  28.130  13.335  1.00 23.14           C
ATOM    739  C   ASN A  97       5.299  28.936  14.615  1.00 25.71           C
ATOM    740  O   ASN A  97       5.507  28.407  15.701  1.00 30.43           O
ATOM    741  CB  ASN A  97       6.133  26.863  13.457  1.00 20.63           C
ATOM    742  CG  ASN A  97       5.879  25.904  12.301  1.00 28.15           C
ATOM    743  OD1 ASN A  97       6.609  25.888  11.307  1.00 31.13           O
ATOM    744  ND2 ASN A  97       4.804  25.137  12.404  1.00 28.58           N
ATOM    745  N   ASP A  98       5.080  30.234  14.467  1.00 28.81           N
ATOM    746  CA  ASP A  98       4.989  31.154  15.582  1.00 33.92           C
ATOM    747  C   ASP A  98       6.112  31.343  16.585  1.00 34.80           C
ATOM    748  O   ASP A  98       5.859  31.709  17.742  1.00 37.04           O
ATOM    749  CB  ASP A  98       3.668  30.954  16.311  1.00 44.04           C
ATOM    750  CG  ASP A  98       2.530  31.640  15.611  1.00 52.45           C
ATOM    751  OD1 ASP A  98       2.575  32.887  15.519  1.00 56.60           O
ATOM    752  OD2 ASP A  98       1.613  30.934  15.133  1.00 61.09           O
ATOM    753  N   VAL A  99       7.347  31.100  16.162  1.00 31.89           N
ATOM    754  CA  VAL A  99       8.480  31.349  17.044  1.00 28.45           C
ATOM    755  C   VAL A  99       8.705  32.856  16.867  1.00 27.59           C
ATOM    756  O   VAL A  99       8.935  33.335  15.750  1.00 29.78           O
ATOM    757  CB  VAL A  99       9.724  30.574  16.606  1.00 28.67           C
ATOM    758  CG1 VAL A  99      10.832  30.760  17.626  1.00 26.83           C
ATOM    759  CG2 VAL A  99       9.383  29.104  16.434  1.00 29.55           C
ATOM    760  N   ASN A 100       8.576  33.609  17.949  1.00 23.59           N
ATOM    761  CA  ASN A 100       8.724  35.055  17.876  1.00 25.30           C
ATOM    762  C   ASN A 100      10.144  35.555  18.162  1.00 25.90           C
ATOM    763  O   ASN A 100      10.525  36.641  17.713  1.00 24.77           O
ATOM    764  CB  ASN A 100       7.724  35.710  18.839  1.00 22.17           C
ATOM    765  CG  ASN A 100       7.386  37.128  18.451  1.00 22.87           C
ATOM    766  OD1 ASN A 100       6.824  37.365  17.387  1.00 27.52           O
ATOM    767  ND2 ASN A 100       7.737  38.083  19.306  1.00 20.31           N
ATOM    768  N   LYS A 101      10.913  34.756  18.903  1.00 23.79           N
ATOM    769  CA  LYS A 101      12.280  35.108  19.285  1.00 25.79           C
ATOM    770  C   LYS A 101      13.349  34.282  18.581  1.00 25.08           C
ATOM    771  O   LYS A 101      13.335  33.054  18.609  1.00 23.20           O
ATOM    772  CB  LYS A 101      12.468  34.963  20.795  1.00 25.57           C
ATOM    773  CG  LYS A 101      11.957  36.123  21.627  1.00 25.40           C
ATOM    774  CD  LYS A 101      12.517  36.003  23.035  1.00 28.23           C
ATOM    775  CE  LYS A 101      12.961  37.342  23.580  1.00 27.26           C
ATOM    776  NZ  LYS A 101      13.862  38.022  22.638  1.00 27.99           N
ATOM    777  N   LEU A 102      14.315  34.979  17.997  1.00 25.18           N
ATOM    778  CA  LEU A 102      15.403  34.330  17.280  1.00 22.94           C
ATOM    779  C   LEU A 102      16.635  35.216  17.325  1.00 22.40           C
ATOM    780  O   LEU A 102      16.522  36.441  17.330  1.00 20.17           O
ATOM    781  CB  LEU A 102      14.978  34.059  15.833  1.00 22.03           C
ATOM    782  CG  LEU A 102      15.943  33.407  14.843  1.00 24.11           C
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ATOM    783  CD1 LEU A 102      15.149  32.609  13.808  1.00 19.11           C
ATOM    784  CD2 LEU A 102      16.830  34.470  14.180  1.00 20.23           C
ATOM    785  N   LEU A 103      17.801  34.594  17.485  1.00 20.47           N
ATOM    786  CA  LEU A 103      19.050  35.340  17.499  1.00 19.02           C
ATOM    787  C   LEU A 103      19.928  34.828  16.361  1.00 20.80           C
ATOM    788  O   LEU A 103      20.236  33.634  16.296  1.00 19.82           O
ATOM    789  CB  LEU A 103      19.787  35.183  18.825  1.00 20.80           C
ATOM    790  CG  LEU A 103      21.035  36.066  18.826  1.00 18.00           C
ATOM    791  CD1 LEU A 103      20.646  37.506  19.115  1.00 18.01           C
ATOM    792  CD2 LEU A 103      22.016  35.573  19.841  1.00 17.96           C
ATOM    793  N   PHE A 104      20.281  35.726  15.444  1.00 20.56           N
ATOM    794  CA  PHE A 104      21.125  35.408  14.297  1.00 21.46           C
ATOM    795  C   PHE A 104      22.563  35.869  14.570  1.00 22.79           C
ATOM    796  O   PHE A 104      22.794  36.997  15.014  1.00 22.46           O
ATOM    797  CB  PHE A 104      20.565  36.105  13.049  1.00 21.57           C
ATOM    798  CG  PHE A 104      21.380  35.890  11.802  1.00 23.33           C
ATOM    799  CD1 PHE A 104      21.444  34.635  11.202  1.00 26.14           C
ATOM    800  CD2 PHE A 104      22.086  36.941  11.224  1.00 21.59           C
ATOM    801  CE1 PHE A 104      22.205  34.431  10.043  1.00 24.02           C
ATOM    802  CE2 PHE A 104      22.845  36.745  10.067  1.00 20.52           C
ATOM    803  CZ  PHE A 104      22.905  35.494   9.480  1.00 17.49           C
ATOM    804  N   LEU A 105      23.516  34.966  14.346  1.00 25.28           N
ATOM    805  CA  LEU A 105      24.939  35.252  14.543  1.00 25.01           C
ATOM    806  C   LEU A 105      25.590  35.564  13.220  1.00 24.60           C
ATOM    807  O   LEU A 105      25.660  34.711  12.336  1.00 28.41           O
ATOM    808  CB  LEU A 105      25.644  34.055  15.146  1.00 25.44           C
ATOM    809  CG  LEU A 105      25.080  33.686  16.502  1.00 30.67           C
ATOM    810  CD1 LEU A 105      25.702  32.401  16.952  1.00 40.93           C
ATOM    811  CD2 LEU A 105      25.378  34.774  17.481  1.00 35.86           C
ATOM    812  N   GLY A 106      26.048  36.800  13.082  1.00 24.93           N
ATOM    813  CA  GLY A 106      26.685  37.208  11.850  1.00 27.80           C
ATOM    814  C   GLY A 106      28.181  37.021  11.939  1.00 30.16           C
ATOM    815  O   GLY A 106      28.670  36.113  12.607  1.00 27.94           O
ATOM    816  N   SER A 107      28.917  37.980  11.375  1.00 31.79           N
ATOM    817  CA  SER A 107      30.368  37.894  11.371  1.00 32.80           C
ATOM    818  C   SER A 107      30.972  39.272  11.112  1.00 33.57           C
ATOM    819  O   SER A 107      30.327  40.135  10.521  1.00 34.39           O
ATOM    820  CB  SER A 107      30.793  36.910  10.279  1.00 33.43           C
ATOM    821  OG  SER A 107      32.176  36.676  10.307  1.00 39.11           O
ATOM    822  N   SER A 108      32.212  39.478  11.560  1.00 35.89           N
ATOM    823  CA  SER A 108      32.892  40.754  11.395  1.00 36.25           C
ATOM    824  C   SER A 108      33.402  40.965   9.978  1.00 36.16           C
ATOM    825  O   SER A 108      33.631  42.097   9.564  1.00 37.37           O
ATOM    826  CB  SER A 108      34.038  40.883  12.391  1.00 34.62           C
ATOM    827  OG  SER A 108      34.953  39.818  12.238  1.00 42.13           O
ATOM    828  N   CYS A 109      33.609  39.868   9.259  1.00 37.14           N
ATOM    829  CA  CYS A 109      34.098  39.942   7.883  1.00 38.02           C
ATOM    830  C   CYS A 109      33.012  40.398   6.906  1.00 34.24           C
ATOM    831  O   CYS A 109      33.206  40.436   5.700  1.00 37.29           O
ATOM    832  CB  CYS A 109      34.737  38.605   7.464  1.00 42.97           C
ATOM    833  SG  CYS A 109      33.748  37.121   7.765  1.00 51.33           S
ATOM    834  N   ILE A 110      31.891  40.825   7.473  1.00 29.76           N
ATOM    835  CA  ILE A 110      30.730  41.321   6.758  1.00 29.62           C
ATOM    836  C   ILE A 110      30.893  42.822   6.446  1.00 24.97           C
ATOM    837  O   ILE A 110      30.217  43.355   5.573  1.00 24.10           O
ATOM    838  CB  ILE A 110      29.484  41.172   7.656  1.00 34.86           C
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ATOM    839  CG1 ILE A 110      28.931  39.768   7.625  1.00 36.57           C
ATOM    840  CG2 ILE A 110      28.390  42.090   7.256  1.00 41.13           C
ATOM    841  CD1 ILE A 110      27.645  39.708   8.427  1.00 36.78           C
ATOM    842  N   TYR A 111      31.732  43.504   7.201  1.00 22.20           N
ATOM    843  CA  TYR A 111      31.953  44.934   6.994  1.00 19.66           C
ATOM    844  C   TYR A 111      32.881  45.222   5.826  1.00 21.91           C
ATOM    845  O   TYR A 111      33.708  44.377   5.462  1.00 20.16           O
ATOM    846  CB  TYR A 111      32.524  45.558   8.258  1.00 15.60           C
ATOM    847  CG  TYR A 111      31.501  45.675   9.337  1.00 16.58           C
ATOM    848  CD1 TYR A 111      30.430  46.567   9.216  1.00 19.56           C
ATOM    849  CD2 TYR A 111      31.605  44.919  10.501  1.00 17.52           C
ATOM    850  CE1 TYR A 111      29.482  46.706  10.242  1.00 18.68           C
ATOM    851  CE2 TYR A 111      30.667  45.051  11.536  1.00 21.66           C
ATOM    852  CZ  TYR A 111      29.616  45.945  11.398  1.00 20.43           C
ATOM    853  OH  TYR A 111      28.729  46.102  12.430  1.00 24.08           O
ATOM    854  N   PRO A 112      32.770  46.429   5.235  1.00 22.08           N
ATOM    855  CA  PRO A 112      33.605  46.829   4.098  1.00 21.89           C
ATOM    856  C   PRO A 112      35.076  46.656   4.412  1.00 22.87           C
ATOM    857  O   PRO A 112      35.480  46.795   5.557  1.00 21.81           O
ATOM    858  CB  PRO A 112      33.247  48.290   3.913  1.00 20.04           C
ATOM    859  CG  PRO A 112      31.809  48.331   4.339  1.00 23.89           C
ATOM    860  CD  PRO A 112      31.804  47.488   5.579  1.00 21.47           C
ATOM    861  N   LYS A 113      35.854  46.292   3.396  1.00 28.24           N
ATOM    862  CA  LYS A 113      37.293  46.087   3.539  1.00 32.85           C
ATOM    863  C   LYS A 113      37.974  47.357   4.070  1.00 35.04           C
ATOM    864  O   LYS A 113      38.807  47.297   4.984  1.00 35.35           O
ATOM    865  CB  LYS A 113      37.907  45.696   2.182  1.00 34.21           C
ATOM    866  CG  LYS A 113      39.384  45.359   2.258  1.00 43.38           C
ATOM    867  CD  LYS A 113      40.066  45.284   0.893  1.00 49.96           C
ATOM    868  CE  LYS A 113      41.558  44.953   1.075  1.00 51.58           C
ATOM    869  NZ  LYS A 113      42.352  45.044  -0.185  1.00 55.85           N
ATOM    870  N   LEU A 114      37.580  48.503   3.516  1.00 36.50           N
ATOM    871  CA  LEU A 114      38.152  49.790   3.903  1.00 37.33           C
ATOM    872  C   LEU A 114      37.277  50.629   4.837  1.00 34.59           C
ATOM    873  O   LEU A 114      37.253  51.853   4.764  1.00 37.28           O
ATOM    874  CB  LEU A 114      38.534  50.582   2.649  1.00 38.36           C
ATOM    875  CG  LEU A 114      39.563  49.851   1.777  1.00 43.26           C
ATOM    876  CD1 LEU A 114      39.796  50.618   0.498  1.00 44.42           C
ATOM    877  CD2 LEU A 114      40.877  49.651   2.538  1.00 38.34           C
ATOM    878  N   ALA A 115      36.594  49.959   5.752  1.00 32.34           N
ATOM    879  CA  ALA A 115      35.735  50.634   6.704  1.00 31.40           C
ATOM    880  C   ALA A 115      36.516  51.528   7.680  1.00 34.23           C
ATOM    881  O   ALA A 115      37.713  51.355   7.890  1.00 34.61           O
ATOM    882  CB  ALA A 115      34.931  49.607   7.470  1.00 28.20           C
ATOM    883  N   LYS A 116      35.809  52.488   8.265  1.00 36.34           N
ATOM    884  CA  LYS A 116      36.359  53.422   9.241  1.00 35.76           C
ATOM    885  C   LYS A 116      36.519  52.645  10.545  1.00 31.92           C
ATOM    886  O   LYS A 116      35.632  51.879  10.905  1.00 31.98           O
ATOM    887  CB  LYS A 116      35.356  54.568   9.430  1.00 43.65           C
ATOM    888  CG  LYS A 116      35.727  55.629  10.455  1.00 56.26           C
ATOM    889  CD  LYS A 116      34.491  56.466  10.826  1.00 66.05           C
ATOM    890  CE  LYS A 116      34.803  57.567  11.848  1.00 70.86           C
ATOM    891  NZ  LYS A 116      35.633  58.672  11.269  1.00 74.53           N
ATOM    892  N   GLN A 117      37.636  52.847  11.246  1.00 29.36           N
ATOM    893  CA  GLN A 117      37.924  52.158  12.516  1.00 25.23           C
ATOM    894  C   GLN A 117      37.839  53.083  13.744  1.00 25.91           C
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ATOM    895  O   GLN A 117      38.269  54.229  13.690  1.00 31.19           O
ATOM    896  CB  GLN A 117      39.330  51.549  12.466  1.00 24.79           C
ATOM    897  CG  GLN A 117      39.615  50.686  11.249  1.00 18.82           C
ATOM    898  CD  GLN A 117      38.805  49.424  11.258  1.00 19.97           C
ATOM    899  OE1 GLN A 117      38.556  48.846  12.313  1.00 22.85           O
ATOM    900  NE2 GLN A 117      38.379  48.985  10.083  1.00 20.40           N
ATOM    901  N   PRO A 118      37.225  52.617  14.848  1.00 25.27           N
ATOM    902  CA  PRO A 118      36.607  51.290  14.997  1.00 26.27           C
ATOM    903  C   PRO A 118      35.317  51.255  14.168  1.00 26.18           C
ATOM    904  O   PRO A 118      34.716  52.298  13.925  1.00 26.28           O
ATOM    905  CB  PRO A 118      36.352  51.194  16.510  1.00 24.60           C
ATOM    906  CG  PRO A 118      36.182  52.628  16.930  1.00 24.19           C
ATOM    907  CD  PRO A 118      37.241  53.341  16.132  1.00 21.64           C
ATOM    908  N   MET A 119      34.926  50.076  13.695  1.00 23.90           N
ATOM    909  CA  MET A 119      33.740  49.944  12.853  1.00 20.88           C
ATOM    910  C   MET A 119      32.399  49.934  13.574  1.00 23.26           C
ATOM    911  O   MET A 119      32.068  48.970  14.271  1.00 24.99           O
ATOM    912  CB  MET A 119      33.861  48.690  12.005  1.00 20.51           C
ATOM    913  CG  MET A 119      35.163  48.597  11.253  1.00 22.75           C
ATOM    914  SD  MET A 119      35.226  47.133  10.232  1.00 26.96           S
ATOM    915  CE  MET A 119      35.458  45.861  11.455  1.00 19.89           C
ATOM    916  N   ALA A 120      31.622  51.001  13.407  1.00 22.28           N
ATOM    917  CA  ALA A 120      30.301  51.069  14.028  1.00 22.25           C
ATOM    918  C   ALA A 120      29.336  50.246  13.166  1.00 22.62           C
ATOM    919  O   ALA A 120      29.649  49.903  12.023  1.00 20.06           O
ATOM    920  CB  ALA A 120      29.827  52.526  14.142  1.00 18.84           C
ATOM    921  N   GLU A 121      28.177  49.912  13.725  1.00 23.12           N
ATOM    922  CA  GLU A 121      27.175  49.124  13.020  1.00 19.21           C
ATOM    923  C   GLU A 121      26.723  49.722  11.685  1.00 19.36           C
ATOM    924  O   GLU A 121      26.407  48.988  10.740  1.00 19.71           O
ATOM    925  CB  GLU A 121      25.976  48.863  13.930  1.00 16.73           C
ATOM    926  CG  GLU A 121      26.240  47.831  15.023  1.00 16.22           C
ATOM    927  CD  GLU A 121      26.769  48.427  16.322  1.00 20.47           C
ATOM    928  OE1 GLU A 121      27.183  49.609  16.353  1.00 21.11           O
ATOM    929  OE2 GLU A 121      26.766  47.702  17.333  1.00 21.30           O
ATOM    930  N   SER A 122      26.758  51.050  11.594  1.00 19.70           N
ATOM    931  CA  SER A 122      26.351  51.775  10.384  1.00 21.40           C
ATOM    932  C   SER A 122      27.360  51.661   9.261  1.00 22.63           C
ATOM    933  O   SER A 122      27.161  52.198   8.169  1.00 26.80           O
ATOM    934  CB  SER A 122      26.135  53.249  10.701  1.00 23.47           C
ATOM    935  OG  SER A 122      27.269  53.770  11.360  1.00 26.99           O
ATOM    936  N   GLU A 123      28.444  50.950   9.531  1.00 23.57           N
ATOM    937  CA  GLU A 123      29.485  50.751   8.546  1.00 20.56           C
ATOM    938  C   GLU A 123      29.046  49.675   7.555  1.00 21.07           C
ATOM    939  O   GLU A 123      29.638  49.515   6.484  1.00 17.46           O
ATOM    940  CB  GLU A 123      30.767  50.355   9.260  1.00 24.43           C
ATOM    941  CG  GLU A 123      31.995  50.876   8.597  1.00 31.37           C
ATOM    942  CD  GLU A 123      31.996  52.375   8.493  1.00 29.79           C
ATOM    943  OE1 GLU A 123      31.643  53.034   9.486  1.00 33.12           O
ATOM    944  OE2 GLU A 123      32.353  52.888   7.415  1.00 35.36           O
ATOM    945  N   LEU A 124      27.976  48.969   7.913  1.00 21.50           N
ATOM    946  CA  LEU A 124      27.419  47.916   7.080  1.00 22.25           C
ATOM    947  C   LEU A 124      26.945  48.441   5.735  1.00 22.95           C
ATOM    948  O   LEU A 124      26.189  49.404   5.678  1.00 22.81           O
ATOM    949  CB  LEU A 124      26.236  47.249   7.777  1.00 24.77           C
ATOM    950  CG  LEU A 124      25.720  46.001   7.056  1.00 26.56           C
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ATOM    951  CD1 LEU A 124      26.748  44.902   7.214  1.00 28.68           C
ATOM    952  CD2 LEU A 124      24.404  45.550   7.630  1.00 29.08           C
ATOM    953  N   LEU A 125      27.383  47.774   4.668  1.00 24.93           N
ATOM    954  CA  LEU A 125      27.021  48.099   3.289  1.00 27.41           C
ATOM    955  C   LEU A 125      27.587  49.417   2.748  1.00 29.75           C
ATOM    956  O   LEU A 125      27.220  49.856   1.655  1.00 33.08           O
ATOM    957  CB  LEU A 125      25.487  48.015   3.090  1.00 20.99           C
ATOM    958  CG  LEU A 125      24.845  46.611   3.080  1.00 21.16           C
ATOM    959  CD1 LEU A 125      23.337  46.705   3.112  1.00 24.02           C
ATOM    960  CD2 LEU A 125      25.261  45.840   1.855  1.00 22.28           C
ATOM    961  N   GLN A 126      28.551  49.981   3.469  1.00 31.56           N
ATOM    962  CA  GLN A 126      29.179  51.246   3.094  1.00 32.38           C
ATOM    963  C   GLN A 126      30.310  51.174   2.074  1.00 33.98           C
ATOM    964  O   GLN A 126      30.896  52.200   1.735  1.00 41.52           O
ATOM    965  CB  GLN A 126      29.707  51.942   4.341  1.00 34.49           C
ATOM    966  CG  GLN A 126      28.634  52.399   5.285  1.00 41.42           C
ATOM    967  CD  GLN A 126      27.835  53.563   4.744  1.00 45.73           C
ATOM    968  OE1 GLN A 126      27.582  53.666   3.536  1.00 46.23           O
ATOM    969  NE2 GLN A 126      27.434  54.456   5.639  1.00 47.94           N
ATOM    970  N   GLY A 127      30.633  49.977   1.599  1.00 32.59           N
ATOM    971  CA  GLY A 127      31.710  49.837   0.636  1.00 28.17           C
ATOM    972  C   GLY A 127      31.958  48.385   0.286  1.00 27.52           C
ATOM    973  O   GLY A 127      31.380  47.482   0.898  1.00 27.86           O
ATOM    974  N   THR A 128      32.851  48.163  -0.673  1.00 26.27           N
ATOM    975  CA  THR A 128      33.164  46.825  -1.136  1.00 27.47           C
ATOM    976  C   THR A 128      33.726  45.902  -0.058  1.00 25.48           C
ATOM    977  O   THR A 128      34.406  46.334   0.872  1.00 26.43           O
ATOM    978  CB  THR A 128      34.097  46.846  -2.384  1.00 28.11           C
ATOM    979  OG1 THR A 128      35.366  47.392  -2.034  1.00 32.42           O
ATOM    980  CG2 THR A 128      33.490  47.688  -3.487  1.00 27.69           C
ATOM    981  N   LEU A 129      33.406  44.623  -0.203  1.00 24.00           N
ATOM    982  CA  LEU A 129      33.830  43.581   0.717  1.00 24.48           C
ATOM    983  C   LEU A 129      35.195  42.996   0.333  1.00 23.74           C
ATOM    984  O   LEU A 129      35.655  43.149  -0.801  1.00 22.27           O
ATOM    985  CB  LEU A 129      32.774  42.462   0.710  1.00 23.29           C
ATOM    986  CG  LEU A 129      31.347  42.886   1.079  1.00 25.81           C
ATOM    987  CD1 LEU A 129      30.327  41.878   0.580  1.00 20.36           C
ATOM    988  CD2 LEU A 129      31.258  43.079   2.588  1.00 19.31           C
ATOM    989  N   GLU A 130      35.851  42.366   1.306  1.00 25.05           N
ATOM    990  CA  GLU A 130      37.132  41.693   1.097  1.00 24.79           C
ATOM    991  C   GLU A 130      36.791  40.542   0.131  1.00 23.00           C
ATOM    992  O   GLU A 130      35.842  39.785   0.369  1.00 22.00           O
ATOM    993  CB  GLU A 130      37.650  41.177   2.450  1.00 29.63           C
ATOM    994  CG  GLU A 130      38.787  40.158   2.400  1.00 44.16           C
ATOM    995  CD  GLU A 130      40.017  40.646   1.628  1.00 52.24           C
ATOM    996  OE1 GLU A 130      40.546  41.738   1.961  1.00 53.62           O
ATOM    997  OE2 GLU A 130      40.454  39.926   0.691  1.00 50.43           O
ATOM    998  N   PRO A 131      37.502  40.443  -1.008  1.00 22.20           N
ATOM    999  CA  PRO A 131      37.220  39.377  -1.975  1.00 21.13           C
ATOM   1000  C   PRO A 131      37.146  37.963  -1.393  1.00 23.60           C
ATOM   1001  O   PRO A 131      36.205  37.219  -1.689  1.00 24.52           O
ATOM   1002  CB  PRO A 131      38.362  39.514  -2.977  1.00 18.52           C
ATOM   1003  CG  PRO A 131      38.638  40.969  -2.960  1.00 20.37           C
ATOM   1004  CD  PRO A 131      38.606  41.296  -1.489  1.00 22.35           C
ATOM   1005  N   THR A 132      38.115  37.597  -0.559  1.00 22.10           N
ATOM   1006  CA  THR A 132      38.135  36.267   0.030  1.00 24.51           C
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ATOM   1007  C   THR A 132      36.820  35.890   0.690  1.00 26.58           C
ATOM   1008  O   THR A 132      36.305  34.797   0.463  1.00 27.50           O
ATOM   1009  CB  THR A 132      39.248  36.133   1.064  1.00 25.92           C
ATOM   1010  OG1 THR A 132      40.512  36.276   0.409  1.00 30.49           O
ATOM   1011  CG2 THR A 132      39.175  34.772   1.759  1.00 25.59           C
ATOM   1012  N   ASN A 133      36.250  36.830   1.440  1.00 27.06           N
ATOM   1013  CA  ASN A 133      35.008  36.603   2.175  1.00 27.75           C
ATOM   1014  C   ASN A 133      33.704  37.029   1.513  1.00 25.66           C
ATOM   1015  O   ASN A 133      32.634  36.820   2.087  1.00 23.82           O
ATOM   1016  CB  ASN A 133      35.109  37.287   3.533  1.00 33.73           C
ATOM   1017  CG  ASN A 133      36.271  36.769   4.351  1.00 42.44           C
ATOM   1018  OD1 ASN A 133      36.375  35.560   4.618  1.00 46.00           O
ATOM   1019  ND2 ASN A 133      37.171  37.671   4.734  1.00 40.37           N
ATOM   1020  N   GLU A 134      33.777  37.568   0.300  1.00 20.95           N
ATOM   1021  CA  GLU A 134      32.581  38.046  -0.364  1.00 20.60           C
ATOM   1022  C   GLU A 134      31.328  37.144  -0.396  1.00 22.54           C
ATOM   1023  O   GLU A 134      30.265  37.573   0.039  1.00 25.49           O
ATOM   1024  CB  GLU A 134      32.913  38.596  -1.747  1.00 20.49           C
ATOM   1025  CG  GLU A 134      31.704  39.214  -2.413  1.00 23.70           C
ATOM   1026  CD  GLU A 134      32.042  39.934  -3.680  1.00 24.22           C
ATOM   1027  OE1 GLU A 134      32.382  41.128  -3.596  1.00 24.55           O
ATOM   1028  OE2 GLU A 134      31.955  39.315  -4.756  1.00 23.77           O
ATOM   1029  N   PRO A 135      31.433  35.890  -0.880  1.00 22.30           N
ATOM   1030  CA  PRO A 135      30.252  35.010  -0.925  1.00 21.74           C
ATOM   1031  C   PRO A 135      29.631  34.771   0.451  1.00 21.23           C
ATOM   1032  O   PRO A 135      28.409  34.876   0.629  1.00 22.09           O
ATOM   1033  CB  PRO A 135      30.815  33.712  -1.513  1.00 20.33           C
ATOM   1034  CG  PRO A 135      31.913  34.204  -2.401  1.00 22.33           C
ATOM   1035  CD  PRO A 135      32.589  35.232  -1.514  1.00 22.69           C
ATOM   1036  N   TYR A 136      30.483  34.452   1.416  1.00 16.85           N
ATOM   1037  CA  TYR A 136      30.055  34.211   2.791  1.00 20.19           C
ATOM   1038  C   TYR A 136      29.419  35.469   3.399  1.00 19.76           C
ATOM   1039  O   TYR A 136      28.381  35.398   4.070  1.00 18.36           O
ATOM   1040  CB  TYR A 136      31.272  33.785   3.625  1.00 20.32           C
ATOM   1041  CG  TYR A 136      31.008  33.592   5.098  1.00 22.24           C
ATOM   1042  CD1 TYR A 136      30.196  32.552   5.549  1.00 22.29           C
ATOM   1043  CD2 TYR A 136      31.613  34.421   6.051  1.00 21.83           C
ATOM   1044  CE1 TYR A 136      29.995  32.333   6.919  1.00 24.72           C
ATOM   1045  CE2 TYR A 136      31.418  34.207   7.420  1.00 24.15           C
ATOM   1046  CZ  TYR A 136      30.607  33.158   7.844  1.00 24.90           C
ATOM   1047  OH  TYR A 136      30.410  32.917   9.187  1.00 34.50           O
ATOM   1048  N   ALA A 137      30.059  36.611   3.151  1.00 17.73           N
ATOM   1049  CA  ALA A 137      29.604  37.899   3.656  1.00 18.91           C
ATOM   1050  C   ALA A 137      28.217  38.265   3.119  1.00 18.09           C
ATOM   1051  O   ALA A 137      27.371  38.758   3.866  1.00 18.98           O
ATOM   1052  CB  ALA A 137      30.621  38.985   3.306  1.00 17.82           C
ATOM   1053  N   ILE A 138      27.978  38.005   1.836  1.00 16.74           N
ATOM   1054  CA  ILE A 138      26.685  38.303   1.222  1.00 17.96           C
ATOM   1055  C   ILE A 138      25.584  37.445   1.839  1.00 18.79           C
ATOM   1056  O   ILE A 138      24.489  37.938   2.089  1.00 16.30           O
ATOM   1057  CB  ILE A 138      26.727  38.107  -0.311  1.00 19.07           C
ATOM   1058  CG1 ILE A 138      27.620  39.178  -0.924  1.00 22.47           C
ATOM   1059  CG2 ILE A 138      25.330  38.194  -0.914  1.00 16.47           C
ATOM   1060  CD1 ILE A 138      27.125  40.573  -0.661  1.00 26.33           C
ATOM   1061  N   ALA A 139      25.876  36.166   2.078  1.00 18.80           N
ATOM   1062  CA  ALA A 139      24.911  35.257   2.695  1.00 19.64           C
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ATOM   1063  C   ALA A 139      24.545  35.756   4.094  1.00 20.55           C
ATOM   1064  O   ALA A 139      23.367  35.788   4.459  1.00 21.55           O
ATOM   1065  CB  ALA A 139      25.484  33.848   2.783  1.00 17.76           C
ATOM   1066  N   LYS A 140      25.562  36.158   4.858  1.00 16.41           N
ATOM   1067  CA  LYS A 140      25.381  36.671   6.208  1.00 14.69           C
ATOM   1068  C   LYS A 140      24.562  37.973   6.263  1.00 16.30           C
ATOM   1069  O   LYS A 140      23.686  38.131   7.115  1.00 17.24           O
ATOM   1070  CB  LYS A 140      26.746  36.860   6.873  1.00 15.99           C
ATOM   1071  CG  LYS A 140      27.395  35.568   7.331  1.00 19.93           C
ATOM   1072  CD  LYS A 140      26.493  34.864   8.333  1.00 22.40           C
ATOM   1073  CE  LYS A 140      27.114  33.602   8.879  1.00 25.32           C
ATOM   1074  NZ  LYS A 140      26.291  33.052   9.988  1.00 26.35           N
ATOM   1075  N   ILE A 141      24.873  38.916   5.377  1.00 17.04           N
ATOM   1076  CA  ILE A 141      24.142  40.172   5.306  1.00 15.15           C
ATOM   1077  C   ILE A 141      22.681  39.875   4.952  1.00 16.31           C
ATOM   1078  O   ILE A 141      21.782  40.469   5.535  1.00 17.36           O
ATOM   1079  CB  ILE A 141      24.769  41.112   4.260  1.00 17.42           C
ATOM   1080  CG1 ILE A 141      26.124  41.596   4.769  1.00 15.96           C
ATOM   1081  CG2 ILE A 141      23.839  42.291   3.955  1.00 16.32           C
ATOM   1082  CD1 ILE A 141      27.024  42.194   3.697  1.00 18.68           C
ATOM   1083  N   ALA A 142      22.455  38.947   4.016  1.00 14.25           N
ATOM   1084  CA  ALA A 142      21.106  38.553   3.611  1.00 15.77           C
ATOM   1085  C   ALA A 142      20.357  37.992   4.817  1.00 18.41           C
ATOM   1086  O   ALA A 142      19.142  38.177   4.933  1.00 20.21           O
ATOM   1087  CB  ALA A 142      21.154  37.513   2.505  1.00 15.02           C
ATOM   1088  N   GLY A 143      21.084  37.308   5.704  1.00 17.64           N
ATOM   1089  CA  GLY A 143      20.487  36.759   6.911  1.00 14.45           C
ATOM   1090  C   GLY A 143      20.013  37.857   7.855  1.00 18.79           C
ATOM   1091  O   GLY A 143      18.969  37.721   8.485  1.00 17.27           O
ATOM   1092  N   ILE A 144      20.776  38.945   7.964  1.00 19.35           N
ATOM   1093  CA  ILE A 144      20.392  40.067   8.826  1.00 18.06           C
ATOM   1094  C   ILE A 144      19.153  40.753   8.253  1.00 16.67           C
ATOM   1095  O   ILE A 144      18.237  41.094   8.987  1.00 19.06           O
ATOM   1096  CB  ILE A 144      21.532  41.125   8.950  1.00 19.55           C
ATOM   1097  CG1 ILE A 144      22.699  40.563   9.778  1.00 14.18           C
ATOM   1098  CG2 ILE A 144      21.005  42.426   9.590  1.00 15.26           C
ATOM   1099  CD1 ILE A 144      23.952  41.438   9.723  1.00 13.91           C
ATOM   1100  N   LYS A 145      19.128  40.944   6.940  1.00 14.88           N
ATOM   1101  CA  LYS A 145      17.997  41.590   6.285  1.00 17.39           C
ATOM   1102  C   LYS A 145      16.720  40.740   6.314  1.00 18.58           C
ATOM   1103  O   LYS A 145      15.612  41.278   6.255  1.00 20.09           O
ATOM   1104  CB  LYS A 145      18.370  42.009   4.864  1.00 16.44           C
ATOM   1105  CG  LYS A 145      19.540  42.989   4.830  1.00 16.92           C
ATOM   1106  CD  LYS A 145      19.225  44.231   5.634  1.00 18.62           C
ATOM   1107  CE  LYS A 145      20.439  45.106   5.868  1.00 16.66           C
ATOM   1108  NZ  LYS A 145      20.048  46.282   6.703  1.00 18.10           N
ATOM   1109  N   LEU A 146      16.872  39.418   6.355  1.00 17.80           N
ATOM   1110  CA  LEU A 146      15.725  38.531   6.461  1.00 17.87           C
ATOM   1111  C   LEU A 146      15.091  38.854   7.812  1.00 19.79           C
ATOM   1112  O   LEU A 146      13.895  39.103   7.895  1.00 22.19           O
ATOM   1113  CB  LEU A 146      16.164  37.073   6.451  1.00 14.28           C
ATOM   1114  CG  LEU A 146      16.209  36.408   5.083  1.00 20.97           C
ATOM   1115  CD1 LEU A 146      17.004  35.120   5.160  1.00 19.96           C
ATOM   1116  CD2 LEU A 146      14.785  36.148   4.588  1.00 16.73           C
ATOM   1117  N   CYS A 147      15.916  38.902   8.855  1.00 18.21           N
ATOM   1118  CA  CYS A 147      15.452  39.206  10.205  1.00 18.24           C
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ATOM   1119  C   CYS A 147      14.706  40.532  10.271  1.00 18.48           C
ATOM   1120  O   CYS A 147      13.582  40.590  10.771  1.00 22.69           O
ATOM   1121  CB  CYS A 147      16.631  39.263  11.180  1.00 17.45           C
ATOM   1122  SG  CYS A 147      17.353  37.676  11.575  1.00 19.67           S
ATOM   1123  N   GLU A 148      15.357  41.592   9.795  1.00 17.49           N
ATOM   1124  CA  GLU A 148      14.786  42.941   9.793  1.00 18.02           C
ATOM   1125  C   GLU A 148      13.472  42.989   9.027  1.00 17.35           C
ATOM   1126  O   GLU A 148      12.519  43.622   9.463  1.00 19.52           O
ATOM   1127  CB  GLU A 148      15.795  43.941   9.223  1.00 13.48           C
ATOM   1128  CG  GLU A 148      17.027  44.091  10.122  1.00 14.09           C
ATOM   1129  CD  GLU A 148      18.067  45.053   9.590  1.00 16.13           C
ATOM   1130  OE1 GLU A 148      17.994  45.455   8.406  1.00 15.71           O
ATOM   1131  OE2 GLU A 148      18.968  45.419  10.376  1.00 20.93           O
ATOM   1132  N   SER A 149      13.416  42.244   7.929  1.00 18.05           N
ATOM   1133  CA  SER A 149      12.230  42.166   7.088  1.00 17.48           C
ATOM   1134  C   SER A 149      11.062  41.467   7.775  1.00 18.41           C
ATOM   1135  O   SER A 149       9.923  41.877   7.592  1.00 19.57           O
ATOM   1136  CB  SER A 149      12.569  41.491   5.761  1.00 17.26           C
ATOM   1137  OG  SER A 149      13.441  42.325   5.008  1.00 15.24           O
ATOM   1138  N   TYR A 150      11.340  40.426   8.567  1.00 18.50           N
ATOM   1139  CA  TYR A 150      10.292  39.720   9.298  1.00 16.46           C
ATOM   1140  C   TYR A 150       9.850  40.561  10.476  1.00 18.58           C
ATOM   1141  O   TYR A 150       8.681  40.569  10.823  1.00 20.77           O
ATOM   1142  CB  TYR A 150      10.745  38.337   9.758  1.00 14.47           C
ATOM   1143  CG  TYR A 150      10.581  37.298   8.679  1.00 15.98           C
ATOM   1144  CD1 TYR A 150      11.533  37.158   7.662  1.00 16.40           C
ATOM   1145  CD2 TYR A 150       9.435  36.511   8.615  1.00 17.21           C
ATOM   1146  CE1 TYR A 150      11.338  36.268   6.607  1.00 17.76           C
ATOM   1147  CE2 TYR A 150       9.230  35.613   7.558  1.00 17.07           C
ATOM   1148  CZ  TYR A 150      10.183  35.503   6.562  1.00 17.15           C
ATOM   1149  OH  TYR A 150       9.976  34.650   5.509  1.00 20.49           O
ATOM   1150  N   ASN A 151      10.791  41.281  11.076  1.00 16.84           N
ATOM   1151  CA  ASN A 151      10.477  42.175  12.182  1.00 19.08           C
ATOM   1152  C   ASN A 151       9.517  43.248  11.681  1.00 19.68           C
ATOM   1153  O   ASN A 151       8.507  43.521  12.316  1.00 22.41           O
ATOM   1154  CB  ASN A 151      11.736  42.864  12.704  1.00 15.20           C
ATOM   1155  CG  ASN A 151      12.666  41.927  13.438  1.00 17.06           C
ATOM   1156  OD1 ASN A 151      13.778  42.314  13.797  1.00 24.69           O
ATOM   1157  ND2 ASN A 151      12.223  40.699  13.674  1.00 11.49           N
ATOM   1158  N   ARG A 152       9.847  43.859  10.545  1.00 21.99           N
ATOM   1159  CA  ARG A 152       9.021  44.908   9.954  1.00 21.12           C
ATOM   1160  C   ARG A 152       7.638  44.446   9.499  1.00 20.62           C
ATOM   1161  O   ARG A 152       6.631  44.974   9.952  1.00 20.11           O
ATOM   1162  CB  ARG A 152       9.751  45.585   8.781  1.00 18.62           C
ATOM   1163  CG  ARG A 152      10.876  46.524   9.214  1.00 17.48           C
ATOM   1164  CD  ARG A 152      11.693  47.039   8.027  1.00 17.77           C
ATOM   1165  NE  ARG A 152      10.952  47.989   7.208  1.00 20.16           N
ATOM   1166  CZ  ARG A 152      10.992  48.027   5.879  1.00 24.77           C
ATOM   1167  NH1 ARG A 152      11.738  47.155   5.206  1.00 23.93           N
ATOM   1168  NH2 ARG A 152      10.309  48.960   5.219  1.00 24.06           N
ATOM   1169  N   GLN A 153       7.593  43.437   8.637  1.00 19.51           N
ATOM   1170  CA  GLN A 153       6.327  42.946   8.114  1.00 19.68           C
ATOM   1171  C   GLN A 153       5.431  42.226   9.104  1.00 20.21           C
ATOM   1172  O   GLN A 153       4.249  42.526   9.194  1.00 21.19           O
ATOM   1173  CB  GLN A 153       6.563  42.038   6.906  1.00 17.52           C
ATOM   1174  CG  GLN A 153       5.277  41.544   6.243  1.00 15.78           C
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ATOM   1175  CD  GLN A 153       5.511  40.720   4.979  1.00 16.28           C
ATOM   1176  OE1 GLN A 153       4.616  40.019   4.513  1.00 22.19           O
ATOM   1177  NE2 GLN A 153       6.696  40.818   4.411  1.00 10.51           N
ATOM   1178  N   TYR A 154       5.995  41.308   9.877  1.00 21.58           N
ATOM   1179  CA  TYR A 154       5.201  40.506  10.806  1.00 19.10           C
ATOM   1180  C   TYR A 154       5.279  40.824  12.286  1.00 18.98           C
ATOM   1181  O   TYR A 154       4.620  40.172  13.086  1.00 22.18           O
ATOM   1182  CB  TYR A 154       5.505  39.021  10.582  1.00 18.19           C
ATOM   1183  CG  TYR A 154       5.183  38.528   9.173  1.00 23.71           C
ATOM   1184  CD1 TYR A 154       3.857  38.336   8.762  1.00 20.58           C
ATOM   1185  CD2 TYR A 154       6.199  38.230   8.263  1.00 20.42           C
ATOM   1186  CE1 TYR A 154       3.550  37.857   7.484  1.00 21.08           C
ATOM   1187  CE2 TYR A 154       5.903  37.747   6.976  1.00 23.78           C
ATOM   1188  CZ  TYR A 154       4.572  37.563   6.595  1.00 25.66           C
ATOM   1189  OH  TYR A 154       4.266  37.080   5.335  1.00 25.81           O
ATOM   1190  N   GLY A 155       6.051  41.837  12.654  1.00 17.96           N
ATOM   1191  CA  GLY A 155       6.176  42.191  14.053  1.00 18.81           C
ATOM   1192  C   GLY A 155       6.923  41.145  14.859  1.00 22.00           C
ATOM   1193  O   GLY A 155       6.629  40.927  16.029  1.00 24.07           O
ATOM   1194  N   ARG A 156       7.890  40.487  14.226  1.00 24.23           N
ATOM   1195  CA  ARG A 156       8.701  39.473  14.897  1.00 22.26           C
ATOM   1196  C   ARG A 156       9.804  40.126  15.740  1.00 20.28           C
ATOM   1197  O   ARG A 156       9.979  41.347  15.723  1.00 17.69           O
ATOM   1198  CB  ARG A 156       9.321  38.530  13.870  1.00 20.16           C
ATOM   1199  CG  ARG A 156       8.321  37.604  13.213  1.00 19.74           C
ATOM   1200  CD  ARG A 156       7.642  36.765  14.263  1.00 18.88           C
ATOM   1201  NE  ARG A 156       6.711  35.816  13.669  1.00 21.98           N
ATOM   1202  CZ  ARG A 156       5.744  35.194  14.340  1.00 22.35           C
ATOM   1203  NH1 ARG A 156       5.575  35.427  15.630  1.00 21.83           N
ATOM   1204  NH2 ARG A 156       4.966  34.312  13.728  1.00 23.42           N
ATOM   1205  N   ASP A 157      10.527  39.301  16.494  1.00 20.16           N
ATOM   1206  CA  ASP A 157      11.612  39.782  17.345  1.00 23.28           C
ATOM   1207  C   ASP A 157      12.882  38.966  17.044  1.00 23.30           C
ATOM   1208  O   ASP A 157      13.382  38.215  17.893  1.00 20.61           O
ATOM   1209  CB  ASP A 157      11.210  39.663  18.820  1.00 23.18           C
ATOM   1210  CG  ASP A 157      12.194  40.344  19.747  1.00 26.62           C
ATOM   1211  OD1 ASP A 157      13.021  41.148  19.269  1.00 30.37           O
ATOM   1212  OD2 ASP A 157      12.143  40.077  20.961  1.00 27.34           O
ATOM   1213  N   TYR A 158      13.360  39.110  15.807  1.00 20.90           N
ATOM   1214  CA  TYR A 158      14.530  38.411  15.304  1.00 15.54           C
ATOM   1215  C   TYR A 158      15.712  39.354  15.374  1.00 18.02           C
ATOM   1216  O   TYR A 158      15.864  40.261  14.551  1.00 17.09           O
ATOM   1217  CB  TYR A 158      14.285  37.962  13.865  1.00 14.88           C
ATOM   1218  CG  TYR A 158      13.153  36.964  13.702  1.00 17.14           C
ATOM   1219  CD1 TYR A 158      12.524  36.396  14.818  1.00 16.33           C
ATOM   1220  CD2 TYR A 158      12.719  36.575  12.429  1.00 14.48           C
ATOM   1221  CE1 TYR A 158      11.498  35.471  14.676  1.00 18.66           C
ATOM   1222  CE2 TYR A 158      11.690  35.646  12.271  1.00 19.01           C
ATOM   1223  CZ  TYR A 158      11.082  35.096  13.407  1.00 24.24           C
ATOM   1224  OH  TYR A 158      10.067  34.165  13.282  1.00 23.65           O
ATOM   1225  N   ARG A 159      16.525  39.150  16.400  1.00 18.93           N
ATOM   1226  CA  ARG A 159      17.700  39.965  16.657  1.00 17.63           C
ATOM   1227  C   ARG A 159      18.963  39.349  16.056  1.00 19.75           C
ATOM   1228  O   ARG A 159      18.982  38.169  15.691  1.00 17.88           O
ATOM   1229  CB  ARG A 159      17.852  40.141  18.167  1.00 16.87           C
ATOM   1230  CG  ARG A 159      16.554  40.565  18.812  1.00 18.13           C
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ATOM   1231  CD  ARG A 159      16.643  40.658  20.308  1.00 19.95           C
ATOM   1232  NE  ARG A 159      15.344  40.986  20.893  1.00 23.79           N
ATOM   1233  CZ  ARG A 159      15.160  41.349  22.160  1.00 30.29           C
ATOM   1234  NH1 ARG A 159      16.191  41.437  22.992  1.00 27.48           N
ATOM   1235  NH2 ARG A 159      13.942  41.621  22.603  1.00 25.50           N
ATOM   1236  N   SER A 160      20.003  40.165  15.922  1.00 21.52           N
ATOM   1237  CA  SER A 160      21.258  39.698  15.352  1.00 23.62           C
ATOM   1238  C   SER A 160      22.476  40.373  15.985  1.00 23.16           C
ATOM   1239  O   SER A 160      22.430  41.546  16.363  1.00 25.95           O
ATOM   1240  CB  SER A 160      21.240  39.890  13.824  1.00 21.06           C
ATOM   1241  OG  SER A 160      21.077  41.248  13.492  1.00 25.26           O
ATOM   1242  N   VAL A 161      23.534  39.586  16.170  1.00 22.67           N
ATOM   1243  CA  VAL A 161      24.789  40.073  16.737  1.00 23.01           C
ATOM   1244  C   VAL A 161      25.956  39.790  15.771  1.00 23.26           C
ATOM   1245  O   VAL A 161      26.003  38.756  15.113  1.00 22.75           O
ATOM   1246  CB  VAL A 161      25.074  39.473  18.144  1.00 20.12           C
ATOM   1247  CG1 VAL A 161      24.002  39.892  19.130  1.00 18.08           C
ATOM   1248  CG2 VAL A 161      25.161  37.975  18.073  1.00 16.75           C
ATOM   1249  N   MET A 162      26.878  40.751  15.692  1.00 26.62           N
ATOM   1250  CA  MET A 162      28.057  40.670  14.817  1.00 26.73           C
ATOM   1251  C   MET A 162      29.305  40.465  15.650  1.00 25.61           C
ATOM   1252  O   MET A 162      29.826  41.414  16.228  1.00 26.50           O
ATOM   1253  CB  MET A 162      28.208  41.970  14.036  1.00 32.18           C
ATOM   1254  CG  MET A 162      28.837  41.794  12.679  1.00 38.35           C
ATOM   1255  SD  MET A 162      27.578  41.641  11.427  1.00 54.63           S
ATOM   1256  CE  MET A 162      26.516  40.326  12.031  1.00 43.07           C
ATOM   1257  N   PRO A 163      29.785  39.219  15.774  1.00 24.89           N
ATOM   1258  CA  PRO A 163      30.986  39.029  16.578  1.00 25.35           C
ATOM   1259  C   PRO A 163      32.297  39.416  15.878  1.00 25.62           C
ATOM   1260  O   PRO A 163      32.350  39.507  14.658  1.00 24.50           O
ATOM   1261  CB  PRO A 163      30.971  37.536  16.912  1.00 22.76           C
ATOM   1262  CG  PRO A 163      29.942  36.916  15.966  1.00 26.37           C
ATOM   1263  CD  PRO A 163      29.366  37.987  15.091  1.00 25.14           C
ATOM   1264  N   THR A 164      33.330  39.690  16.666  1.00 22.61           N
ATOM   1265  CA  THR A 164      34.651  40.009  16.135  1.00 24.20           C
ATOM   1266  C   THR A 164      35.365  38.645  16.015  1.00 23.13           C
ATOM   1267  O   THR A 164      34.695  37.604  16.041  1.00 21.63           O
ATOM   1268  CB  THR A 164      35.389  40.997  17.083  1.00 23.20           C
ATOM   1269  OG1 THR A 164      36.649  41.376  16.509  1.00 24.95           O
ATOM   1270  CG2 THR A 164      35.611  40.400  18.459  1.00 15.02           C
ATOM   1271  N   ASN A 165      36.691  38.623  15.850  1.00 21.86           N
ATOM   1272  CA  ASN A 165      37.445  37.354  15.766  1.00 17.44           C
ATOM   1273  C   ASN A 165      37.233  36.590  17.064  1.00 18.61           C
ATOM   1274  O   ASN A 165      37.379  37.147  18.153  1.00 20.23           O
ATOM   1275  CB  ASN A 165      38.951  37.598  15.584  1.00 17.55           C
ATOM   1276  CG  ASN A 165      39.272  38.393  14.347  1.00 24.23           C
ATOM   1277  OD1 ASN A 165      38.908  38.003  13.240  1.00 29.40           O
ATOM   1278  ND2 ASN A 165      39.945  39.519  14.523  1.00 26.65           N
ATOM   1279  N   LEU A 166      36.882  35.318  16.949  1.00 20.56           N
ATOM   1280  CA  LEU A 166      36.632  34.492  18.117  1.00 21.62           C
ATOM   1281  C   LEU A 166      37.676  33.412  18.260  1.00 22.12           C
ATOM   1282  O   LEU A 166      38.340  33.044  17.302  1.00 24.70           O
ATOM   1283  CB  LEU A 166      35.256  33.827  18.021  1.00 23.01           C
ATOM   1284  CG  LEU A 166      33.998  34.681  17.861  1.00 23.48           C
ATOM   1285  CD1 LEU A 166      32.800  33.755  17.866  1.00 20.16           C
ATOM   1286  CD2 LEU A 166      33.879  35.713  18.975  1.00 17.88           C
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ATOM   1287  N   TYR A 167      37.829  32.924  19.482  1.00 22.17           N
ATOM   1288  CA  TYR A 167      38.769  31.853  19.769  1.00 21.75           C
ATOM   1289  C   TYR A 167      38.278  31.157  21.037  1.00 20.77           C
ATOM   1290  O   TYR A 167      37.424  31.679  21.750  1.00 20.48           O
ATOM   1291  CB  TYR A 167      40.197  32.412  19.942  1.00 19.35           C
ATOM   1292  CG  TYR A 167      40.422  33.184  21.223  1.00 21.90           C
ATOM   1293  CD1 TYR A 167      40.070  34.536  21.323  1.00 17.98           C
ATOM   1294  CD2 TYR A 167      40.965  32.554  22.351  1.00 18.77           C
ATOM   1295  CE1 TYR A 167      40.253  35.234  22.516  1.00 19.87           C
ATOM   1296  CE2 TYR A 167      41.148  33.239  23.539  1.00 18.95           C
ATOM   1297  CZ  TYR A 167      40.792  34.575  23.614  1.00 21.48           C
ATOM   1298  OH  TYR A 167      40.982  35.250  24.790  1.00 24.24           O
ATOM   1299  N   GLY A 168      38.805  29.972  21.311  1.00 22.76           N
ATOM   1300  CA  GLY A 168      38.406  29.241  22.502  1.00 22.06           C
ATOM   1301  C   GLY A 168      38.271  27.759  22.208  1.00 23.53           C
ATOM   1302  O   GLY A 168      38.724  27.299  21.154  1.00 21.40           O
ATOM   1303  N   PRO A 169      37.706  26.972  23.139  1.00 23.29           N
ATOM   1304  CA  PRO A 169      37.547  25.534  22.906  1.00 24.62           C
ATOM   1305  C   PRO A 169      36.628  25.202  21.725  1.00 28.50           C
ATOM   1306  O   PRO A 169      35.729  25.975  21.382  1.00 30.36           O
ATOM   1307  CB  PRO A 169      36.992  25.028  24.240  1.00 26.39           C
ATOM   1308  CG  PRO A 169      36.397  26.255  24.886  1.00 26.70           C
ATOM   1309  CD  PRO A 169      37.366  27.328  24.528  1.00 21.82           C
ATOM   1310  N   HIS A 170      36.892  24.062  21.091  1.00 28.50           N
ATOM   1311  CA  HIS A 170      36.124  23.575  19.948  1.00 30.57           C
ATOM   1312  C   HIS A 170      36.403  24.298  18.662  1.00 32.60           C
ATOM   1313  O   HIS A 170      35.684  24.138  17.674  1.00 34.13           O
ATOM   1314  CB  HIS A 170      34.633  23.545  20.255  1.00 29.85           C
ATOM   1315  CG  HIS A 170      34.297  22.588  21.344  1.00 34.56           C
ATOM   1316  ND1 HIS A 170      34.178  21.233  21.119  1.00 36.57           N
ATOM   1317  CD2 HIS A 170      34.194  22.762  22.683  1.00 35.27           C
ATOM   1318  CE1 HIS A 170      34.026  20.614  22.278  1.00 37.89           C
ATOM   1319  NE2 HIS A 170      34.032  21.518  23.241  1.00 35.12           N
ATOM   1320  N   ASP A 171      37.461  25.097  18.681  1.00 33.78           N
ATOM   1321  CA  ASP A 171      37.884  25.822  17.499  1.00 33.09           C
ATOM   1322  C   ASP A 171      38.602  24.788  16.644  1.00 35.61           C
ATOM   1323  O   ASP A 171      38.974  23.706  17.122  1.00 35.94           O
ATOM   1324  CB  ASP A 171      38.861  26.939  17.881  1.00 30.57           C
ATOM   1325  CG  ASP A 171      38.976  28.012  16.814  1.00 28.37           C
ATOM   1326  OD1 ASP A 171      38.614  27.762  15.640  1.00 29.30           O
ATOM   1327  OD2 ASP A 171      39.424  29.123  17.164  1.00 27.76           O
ATOM   1328  N   ASN A 172      38.791  25.118  15.380  1.00 37.89           N
ATOM   1329  CA  ASN A 172      39.475  24.228  14.462  1.00 41.79           C
ATOM   1330  C   ASN A 172      40.990  24.346  14.689  1.00 42.91           C
ATOM   1331  O   ASN A 172      41.629  25.279  14.201  1.00 42.78           O
ATOM   1332  CB  ASN A 172      39.084  24.617  13.029  1.00 45.80           C
ATOM   1333  CG  ASN A 172      39.788  23.788  11.973  1.00 47.99           C
ATOM   1334  OD1 ASN A 172      40.462  22.798  12.276  1.00 47.72           O
ATOM   1335  ND2 ASN A 172      39.632  24.197  10.714  1.00 47.32           N
ATOM   1336  N   PHE A 173      41.562  23.436  15.470  1.00 44.79           N
ATOM   1337  CA  PHE A 173      43.004  23.492  15.712  1.00 48.38           C
ATOM   1338  C   PHE A 173      43.815  22.768  14.651  1.00 56.73           C
ATOM   1339  O   PHE A 173      45.039  22.668  14.768  1.00 55.79           O
ATOM   1340  CB  PHE A 173      43.365  22.970  17.100  1.00 40.93           C
ATOM   1341  CG  PHE A 173      43.037  23.929  18.201  1.00 40.43           C
ATOM   1342  CD1 PHE A 173      43.964  24.879  18.607  1.00 36.88           C
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ATOM   1343  CD2 PHE A 173      41.786  23.901  18.820  1.00 37.26           C
ATOM   1344  CE1 PHE A 173      43.646  25.782  19.607  1.00 34.47           C
ATOM   1345  CE2 PHE A 173      41.465  24.802  19.822  1.00 32.98           C
ATOM   1346  CZ  PHE A 173      42.391  25.741  20.215  1.00 32.95           C
ATOM   1347  N   HIS A 174      43.128  22.293  13.607  1.00 65.42           N
ATOM   1348  CA  HIS A 174      43.767  21.585  12.498  1.00 69.81           C
ATOM   1349  C   HIS A 174      44.768  22.520  11.816  1.00 72.79           C
ATOM   1350  O   HIS A 174      44.635  23.751  11.880  1.00 72.80           O
ATOM   1351  CB  HIS A 174      42.706  21.079  11.485  1.00 67.57           C
ATOM   1352  N   PRO A 175      45.815  21.944  11.201  1.00 76.20           N
ATOM   1353  CA  PRO A 175      46.867  22.693  10.499  1.00 76.51           C
ATOM   1354  C   PRO A 175      46.330  23.486   9.307  1.00 76.40           C
ATOM   1355  O   PRO A 175      46.940  24.467   8.873  1.00 76.82           O
ATOM   1356  CB  PRO A 175      47.820  21.587  10.051  1.00 78.84           C
ATOM   1357  CG  PRO A 175      46.897  20.394   9.873  1.00 79.98           C
ATOM   1358  CD  PRO A 175      46.055  20.491  11.110  1.00 76.17           C
ATOM   1359  N   SER A 176      45.174  23.061   8.804  1.00 75.91           N
ATOM   1360  CA  SER A 176      44.519  23.705   7.669  1.00 77.56           C
ATOM   1361  C   SER A 176      43.935  25.084   8.022  1.00 76.71           C
ATOM   1362  O   SER A 176      43.845  25.962   7.155  1.00 76.52           O
ATOM   1363  CB  SER A 176      43.396  22.802   7.141  1.00 79.17           C
ATOM   1364  OG  SER A 176      43.848  21.473   6.950  1.00 81.71           O
ATOM   1365  N   ASN A 177      43.552  25.267   9.290  1.00 73.59           N
ATOM   1366  CA  ASN A 177      42.957  26.521   9.762  1.00 69.18           C
ATOM   1367  C   ASN A 177      43.878  27.733   9.675  1.00 65.23           C
ATOM   1368  O   ASN A 177      44.978  27.738  10.234  1.00 62.73           O
ATOM   1369  CB  ASN A 177      42.434  26.384  11.197  1.00 70.22           C
ATOM   1370  CG  ASN A 177      41.494  27.523  11.586  1.00 71.25           C
ATOM   1371  OD1 ASN A 177      40.987  28.244  10.722  1.00 73.62           O
ATOM   1372  ND2 ASN A 177      41.245  27.678  12.881  1.00 68.39           N
ATOM   1373  N   SER A 178      43.376  28.774   9.010  1.00 61.20           N
ATOM   1374  CA  SER A 178      44.105  30.022   8.811  1.00 54.87           C
ATOM   1375  C   SER A 178      43.889  31.068   9.910  1.00 53.61           C
ATOM   1376  O   SER A 178      44.583  32.092   9.924  1.00 55.62           O
ATOM   1377  CB  SER A 178      43.777  30.626   7.433  1.00 51.07           C
ATOM   1378  OG  SER A 178      42.416  30.998   7.327  1.00 39.67           O
ATOM   1379  N   HIS A 179      42.927  30.837  10.810  1.00 47.66           N
ATOM   1380  CA  HIS A 179      42.674  31.790  11.894  1.00 41.46           C
ATOM   1381  C   HIS A 179      43.904  31.828  12.778  1.00 37.33           C
ATOM   1382  O   HIS A 179      44.441  30.791  13.184  1.00 31.30           O
ATOM   1383  CB  HIS A 179      41.390  31.462  12.656  1.00 44.17           C
ATOM   1384  CG  HIS A 179      40.158  31.649  11.829  1.00 49.06           C
ATOM   1385  ND1 HIS A 179      39.234  30.647  11.630  1.00 54.66           N
ATOM   1386  CD2 HIS A 179      39.755  32.690  11.062  1.00 49.34           C
ATOM   1387  CE1 HIS A 179      38.320  31.059  10.768  1.00 52.87           C
ATOM   1388  NE2 HIS A 179      38.614  32.295  10.409  1.00 49.34           N
ATOM   1389  N   VAL A 180      44.394  33.046  12.967  1.00 32.51           N
ATOM   1390  CA  VAL A 180      45.613  33.304  13.702  1.00 30.98           C
ATOM   1391  C   VAL A 180      45.782  32.653  15.079  1.00 28.65           C
ATOM   1392  O   VAL A 180      46.775  31.956  15.297  1.00 30.93           O
ATOM   1393  CB  VAL A 180      45.937  34.834  13.708  1.00 31.66           C
ATOM   1394  CG1 VAL A 180      45.065  35.583  14.700  1.00 27.73           C
ATOM   1395  CG2 VAL A 180      47.407  35.060  13.967  1.00 34.52           C
ATOM   1396  N   ILE A 181      44.815  32.802  15.982  1.00 24.81           N
ATOM   1397  CA  ILE A 181      44.974  32.207  17.314  1.00 23.27           C
ATOM   1398  C   ILE A 181      45.164  30.671  17.340  1.00 24.94           C
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ATOM   1399  O   ILE A 181      46.168  30.181  17.874  1.00 24.17           O
ATOM   1400  CB  ILE A 181      43.892  32.702  18.312  1.00 18.80           C
ATOM   1401  CG1 ILE A 181      44.148  34.177  18.636  1.00 16.10           C
ATOM   1402  CG2 ILE A 181      43.930  31.884  19.595  1.00 15.42           C
ATOM   1403  CD1 ILE A 181      43.142  34.792  19.556  1.00 14.73           C
ATOM   1404  N   PRO A 182      44.224  29.894  16.761  1.00 23.45           N
ATOM   1405  CA  PRO A 182      44.427  28.443  16.792  1.00 22.81           C
ATOM   1406  C   PRO A 182      45.639  27.990  15.982  1.00 22.90           C
ATOM   1407  O   PRO A 182      46.269  26.988  16.321  1.00 23.51           O
ATOM   1408  CB  PRO A 182      43.105  27.890  16.240  1.00 22.99           C
ATOM   1409  CG  PRO A 182      42.561  29.012  15.425  1.00 21.74           C
ATOM   1410  CD  PRO A 182      42.873  30.214  16.271  1.00 24.85           C
ATOM   1411  N   ALA A 183      45.971  28.731  14.928  1.00 20.96           N
ATOM   1412  CA  ALA A 183      47.133  28.397  14.103  1.00 22.42           C
ATOM   1413  C   ALA A 183      48.432  28.621  14.891  1.00 23.70           C
ATOM   1414  O   ALA A 183      49.345  27.791  14.838  1.00 26.05           O
ATOM   1415  CB  ALA A 183      47.147  29.227  12.828  1.00 20.74           C
ATOM   1416  N   LEU A 184      48.508  29.732  15.627  1.00 23.85           N
ATOM   1417  CA  LEU A 184      49.697  30.036  16.421  1.00 23.21           C
ATOM   1418  C   LEU A 184      49.818  29.182  17.671  1.00 23.57           C
ATOM   1419  O   LEU A 184      50.925  28.862  18.080  1.00 25.02           O
ATOM   1420  CB  LEU A 184      49.778  31.523  16.773  1.00 22.64           C
ATOM   1421  CG  LEU A 184      50.109  32.428  15.582  1.00 26.00           C
ATOM   1422  CD1 LEU A 184      50.233  33.865  16.064  1.00 25.71           C
ATOM   1423  CD2 LEU A 184      51.393  31.973  14.903  1.00 19.37           C
ATOM   1424  N   LEU A 185      48.697  28.821  18.292  1.00 23.11           N
ATOM   1425  CA  LEU A 185      48.751  27.972  19.478  1.00 22.32           C
ATOM   1426  C   LEU A 185      49.369  26.639  19.076  1.00 23.75           C
ATOM   1427  O   LEU A 185      50.245  26.120  19.760  1.00 26.08           O
ATOM   1428  CB  LEU A 185      47.358  27.745  20.065  1.00 22.28           C
ATOM   1429  CG  LEU A 185      46.929  28.738  21.146  1.00 25.52           C
ATOM   1430  CD1 LEU A 185      45.501  28.430  21.581  1.00 26.95           C
ATOM   1431  CD2 LEU A 185      47.878  28.657  22.335  1.00 21.32           C
ATOM   1432  N   ARG A 186      48.946  26.133  17.923  1.00 24.14           N
ATOM   1433  CA  ARG A 186      49.429  24.873  17.381  1.00 27.90           C
ATOM   1434  C   ARG A 186      50.927  24.956  17.041  1.00 25.89           C
ATOM   1435  O   ARG A 186      51.714  24.126  17.482  1.00 27.42           O
ATOM   1436  CB  ARG A 186      48.618  24.534  16.123  1.00 32.27           C
ATOM   1437  CG  ARG A 186      48.923  23.202  15.492  1.00 42.10           C
ATOM   1438  CD  ARG A 186      48.360  22.085  16.353  1.00 57.29           C
ATOM   1439  NE  ARG A 186      48.602  20.757  15.789  1.00 66.34           N
ATOM   1440  CZ  ARG A 186      47.748  20.096  15.011  1.00 71.88           C
ATOM   1441  NH1 ARG A 186      46.575  20.628  14.690  1.00 77.21           N
ATOM   1442  NH2 ARG A 186      48.067  18.892  14.555  1.00 75.89           N
ATOM   1443  N   ARG A 187      51.315  25.964  16.265  1.00 23.76           N
ATOM   1444  CA  ARG A 187      52.707  26.130  15.873  1.00 23.58           C
ATOM   1445  C   ARG A 187      53.657  26.308  17.055  1.00 23.83           C
ATOM   1446  O   ARG A 187      54.722  25.695  17.094  1.00 23.85           O
ATOM   1447  CB  ARG A 187      52.858  27.306  14.916  1.00 22.92           C
ATOM   1448  CG  ARG A 187      52.109  27.131  13.627  1.00 29.91           C
ATOM   1449  CD  ARG A 187      52.386  28.289  12.699  1.00 34.96           C
ATOM   1450  NE  ARG A 187      53.813  28.394  12.398  1.00 36.36           N
ATOM   1451  CZ  ARG A 187      54.393  29.465  11.865  1.00 36.75           C
ATOM   1452  NH1 ARG A 187      53.671  30.544  11.569  1.00 32.66           N
ATOM   1453  NH2 ARG A 187      55.699  29.452  11.621  1.00 34.82           N
ATOM   1454  N   PHE A 188      53.289  27.160  18.007  1.00 21.87           N
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ATOM   1455  CA  PHE A 188      54.135  27.387  19.168  1.00 22.62           C
ATOM   1456  C   PHE A 188      54.202  26.149  20.035  1.00 23.20           C
ATOM   1457  O   PHE A 188      55.218  25.889  20.669  1.00 25.48           O
ATOM   1458  CB  PHE A 188      53.674  28.613  19.961  1.00 19.85           C
ATOM   1459  CG  PHE A 188      54.169  29.902  19.385  1.00 22.44           C
ATOM   1460  CD1 PHE A 188      55.532  30.186  19.367  1.00 24.20           C
ATOM   1461  CD2 PHE A 188      53.292  30.804  18.797  1.00 25.31           C
ATOM   1462  CE1 PHE A 188      56.017  31.356  18.761  1.00 29.54           C
ATOM   1463  CE2 PHE A 188      53.758  31.974  18.188  1.00 26.16           C
ATOM   1464  CZ  PHE A 188      55.126  32.252  18.168  1.00 25.25           C
ATOM   1465  N   HIS A 189      53.127  25.368  20.028  1.00 26.13           N
ATOM   1466  CA  HIS A 189      53.077  24.129  20.795  1.00 27.61           C
ATOM   1467  C   HIS A 189      54.109  23.142  20.244  1.00 28.91           C
ATOM   1468  O   HIS A 189      54.890  22.556  20.999  1.00 28.51           O
ATOM   1469  CB  HIS A 189      51.683  23.495  20.727  1.00 28.66           C
ATOM   1470  CG  HIS A 189      51.619  22.133  21.343  1.00 29.06           C
ATOM   1471  ND1 HIS A 189      51.561  21.939  22.705  1.00 29.42           N
ATOM   1472  CD2 HIS A 189      51.668  20.899  20.786  1.00 26.56           C
ATOM   1473  CE1 HIS A 189      51.582  20.644  22.963  1.00 27.30           C
ATOM   1474  NE2 HIS A 189      51.647  19.992  21.816  1.00 27.77           N
ATOM   1475  N   GLU A 190      54.107  22.964  18.927  1.00 27.95           N
ATOM   1476  CA  GLU A 190      55.043  22.052  18.298  1.00 32.43           C
ATOM   1477  C   GLU A 190      56.485  22.529  18.323  1.00 33.01           C
ATOM   1478  O   GLU A 190      57.404  21.723  18.512  1.00 34.26           O
ATOM   1479  CB  GLU A 190      54.601  21.734  16.886  1.00 35.18           C
ATOM   1480  CG  GLU A 190      53.717  20.524  16.863  1.00 52.14           C
ATOM   1481  CD  GLU A 190      52.606  20.667  15.868  1.00 62.86           C
ATOM   1482  OE1 GLU A 190      52.895  20.745  14.649  1.00 67.43           O
ATOM   1483  OE2 GLU A 190      51.441  20.715  16.313  1.00 71.25           O
ATOM   1484  N   ALA A 191      56.681  23.835  18.149  1.00 30.86           N
ATOM   1485  CA  ALA A 191      58.017  24.424  18.174  1.00 27.75           C
ATOM   1486  C   ALA A 191      58.607  24.236  19.575  1.00 26.55           C
ATOM   1487  O   ALA A 191      59.795  23.965  19.717  1.00 29.66           O
ATOM   1488  CB  ALA A 191      57.960  25.915  17.802  1.00 22.11           C
ATOM   1489  N   THR A 192      57.762  24.342  20.598  1.00 23.59           N
ATOM   1490  CA  THR A 192      58.187  24.178  21.981  1.00 24.66           C
ATOM   1491  C   THR A 192      58.570  22.721  22.234  1.00 30.72           C
ATOM   1492  O   THR A 192      59.579  22.444  22.884  1.00 35.21           O
ATOM   1493  CB  THR A 192      57.062  24.583  22.952  1.00 23.45           C
ATOM   1494  OG1 THR A 192      56.717  25.961  22.735  1.00 25.10           O
ATOM   1495  CG2 THR A 192      57.506  24.390  24.390  1.00 15.38           C
ATOM   1496  N   ALA A 193      57.767  21.806  21.688  1.00 33.63           N
ATOM   1497  CA  ALA A 193      57.962  20.358  21.811  1.00 36.84           C
ATOM   1498  C   ALA A 193      59.205  19.858  21.064  1.00 39.73           C
ATOM   1499  O   ALA A 193      59.942  19.004  21.563  1.00 41.67           O
ATOM   1500  CB  ALA A 193      56.708  19.616  21.299  1.00 31.93           C
ATOM   1501  N   GLN A 194      59.414  20.371  19.856  1.00 40.73           N
ATOM   1502  CA  GLN A 194      60.557  19.983  19.042  1.00 42.97           C
ATOM   1503  C   GLN A 194      61.777  20.826  19.391  1.00 43.31           C
ATOM   1504  O   GLN A 194      62.873  20.607  18.872  1.00 45.94           O
ATOM   1505  CB  GLN A 194      60.205  20.114  17.563  1.00 47.00           C
ATOM   1506  CG  GLN A 194      59.064  19.189  17.139  1.00 56.83           C
ATOM   1507  CD  GLN A 194      58.375  19.632  15.851  1.00 64.33           C
ATOM   1508  OE1 GLN A 194      57.337  19.075  15.464  1.00 66.36           O
ATOM   1509  NE2 GLN A 194      58.938  20.650  15.188  1.00 64.56           N
ATOM   1510  N   ASN A 195      61.573  21.783  20.288  1.00 44.74           N
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ATOM   1511  CA  ASN A 195      62.623  22.678  20.755  1.00 46.11           C
ATOM   1512  C   ASN A 195      63.301  23.513  19.651  1.00 43.52           C
ATOM   1513  O   ASN A 195      64.513  23.766  19.697  1.00 41.30           O
ATOM   1514  CB  ASN A 195      63.658  21.878  21.546  1.00 53.76           C
ATOM   1515  CG  ASN A 195      64.323  22.706  22.618  1.00 64.83           C
ATOM   1516  OD1 ASN A 195      65.547  22.712  22.736  1.00 72.18           O
ATOM   1517  ND2 ASN A 195      63.518  23.427  23.404  1.00 67.60           N
ATOM   1518  N   ALA A 196      62.499  23.967  18.686  1.00 38.39           N
ATOM   1519  CA  ALA A 196      62.971  24.776  17.564  1.00 31.94           C
ATOM   1520  C   ALA A 196      63.585  26.103  18.026  1.00 31.76           C
ATOM   1521  O   ALA A 196      63.055  26.771  18.908  1.00 29.94           O
ATOM   1522  CB  ALA A 196      61.824  25.032  16.612  1.00 31.02           C
ATOM   1523  N   PRO A 197      64.729  26.496  17.442  1.00 31.71           N
ATOM   1524  CA  PRO A 197      65.378  27.752  17.833  1.00 29.64           C
ATOM   1525  C   PRO A 197      64.513  29.013  17.609  1.00 28.77           C
ATOM   1526  O   PRO A 197      64.578  29.966  18.395  1.00 23.96           O
ATOM   1527  CB  PRO A 197      66.658  27.747  16.981  1.00 28.41           C
ATOM   1528  CG  PRO A 197      66.279  26.932  15.778  1.00 29.38           C
ATOM   1529  CD  PRO A 197      65.497  25.809  16.384  1.00 28.22           C
ATOM   1530  N   ASP A 198      63.695  28.996  16.556  1.00 27.86           N
ATOM   1531  CA  ASP A 198      62.808  30.118  16.243  1.00 29.44           C
ATOM   1532  C   ASP A 198      61.491  29.738  15.532  1.00 27.01           C
ATOM   1533  O   ASP A 198      61.310  28.610  15.072  1.00 26.16           O
ATOM   1534  CB  ASP A 198      63.561  31.194  15.436  1.00 31.17           C
ATOM   1535  CG  ASP A 198      64.036  30.700  14.071  1.00 37.42           C
ATOM   1536  OD1 ASP A 198      63.830  29.519  13.712  1.00 45.62           O
ATOM   1537  OD2 ASP A 198      64.618  31.517  13.333  1.00 46.36           O
ATOM   1538  N   VAL A 199      60.559  30.682  15.489  1.00 26.77           N
ATOM   1539  CA  VAL A 199      59.274  30.494  14.823  1.00 24.31           C
ATOM   1540  C   VAL A 199      59.095  31.736  13.970  1.00 22.79           C
ATOM   1541  O   VAL A 199      59.045  32.849  14.498  1.00 23.38           O
ATOM   1542  CB  VAL A 199      58.104  30.408  15.825  1.00 26.26           C
ATOM   1543  CG1 VAL A 199      56.776  30.438  15.079  1.00 25.04           C
ATOM   1544  CG2 VAL A 199      58.202  29.137  16.649  1.00 23.60           C
ATOM   1545  N   VAL A 200      59.048  31.558  12.655  1.00 21.04           N
ATOM   1546  CA  VAL A 200      58.900  32.695  11.755  1.00 21.73           C
ATOM   1547  C   VAL A 200      57.456  32.928  11.386  1.00 20.35           C
ATOM   1548  O   VAL A 200      56.768  32.012  10.968  1.00 23.64           O
ATOM   1549  CB  VAL A 200      59.729  32.526  10.471  1.00 21.35           C
ATOM   1550  CG1 VAL A 200      59.567  33.760   9.573  1.00 19.86           C
ATOM   1551  CG2 VAL A 200      61.189  32.298  10.822  1.00 15.73           C
ATOM   1552  N   VAL A 201      57.005  34.166  11.561  1.00 22.28           N
ATOM   1553  CA  VAL A 201      55.636  34.565  11.247  1.00 16.85           C
ATOM   1554  C   VAL A 201      55.714  35.589  10.118  1.00 18.35           C
ATOM   1555  O   VAL A 201      56.566  36.461  10.147  1.00 19.28           O
ATOM   1556  CB  VAL A 201      54.958  35.190  12.483  1.00 21.28           C
ATOM   1557  CG1 VAL A 201      53.520  35.569  12.166  1.00 23.59           C
ATOM   1558  CG2 VAL A 201      54.989  34.211  13.652  1.00 16.15           C
ATOM   1559  N   TRP A 202      54.862  35.447   9.104  1.00 18.25           N
ATOM   1560  CA  TRP A 202      54.838  36.359   7.957  1.00 20.16           C
ATOM   1561  C   TRP A 202      54.323  37.740   8.365  1.00 22.18           C
ATOM   1562  O   TRP A 202      53.381  37.839   9.153  1.00 24.30           O
ATOM   1563  CB  TRP A 202      53.917  35.829   6.852  1.00 19.74           C
ATOM   1564  CG  TRP A 202      54.311  34.536   6.182  1.00 20.85           C
ATOM   1565  CD1 TRP A 202      53.470  33.686   5.525  1.00 18.15           C
ATOM   1566  CD2 TRP A 202      55.635  33.995   6.012  1.00 23.14           C
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ATOM   1567  NE1 TRP A 202      54.176  32.667   4.943  1.00 21.00           N
ATOM   1568  CE2 TRP A 202      55.508  32.824   5.224  1.00 21.04           C
ATOM   1569  CE3 TRP A 202      56.917  34.388   6.439  1.00 25.98           C
ATOM   1570  CZ2 TRP A 202      56.608  32.039   4.848  1.00 19.21           C
ATOM   1571  CZ3 TRP A 202      58.016  33.606   6.064  1.00 26.79           C
ATOM   1572  CH2 TRP A 202      57.849  32.445   5.273  1.00 23.50           C
ATOM   1573  N   GLY A 203      54.935  38.793   7.814  1.00 20.13           N
ATOM   1574  CA  GLY A 203      54.521  40.150   8.115  1.00 18.61           C
ATOM   1575  C   GLY A 203      55.409  40.898   9.101  1.00 22.58           C
ATOM   1576  O   GLY A 203      56.383  40.352   9.611  1.00 23.04           O
ATOM   1577  N   SER A 204      55.049  42.148   9.391  1.00 20.41           N
ATOM   1578  CA  SER A 204      55.812  42.984  10.308  1.00 20.32           C
ATOM   1579  C   SER A 204      55.358  42.860  11.760  1.00 18.18           C
ATOM   1580  O   SER A 204      56.062  43.307  12.660  1.00 20.75           O
ATOM   1581  CB  SER A 204      55.705  44.448   9.889  1.00 18.97           C
ATOM   1582  OG  SER A 204      54.402  44.935  10.148  1.00 21.61           O
ATOM   1583  N   GLY A 205      54.173  42.291  11.980  1.00 18.60           N
ATOM   1584  CA  GLY A 205      53.637  42.142  13.325  1.00 15.10           C
ATOM   1585  C   GLY A 205      52.959  43.404  13.852  1.00 17.19           C
ATOM   1586  O   GLY A 205      52.396  43.410  14.953  1.00 16.05           O
ATOM   1587  N   THR A 206      52.998  44.473  13.058  1.00 17.93           N
ATOM   1588  CA  THR A 206      52.395  45.752  13.445  1.00 18.27           C
ATOM   1589  C   THR A 206      50.869  45.873  13.295  1.00 18.97           C
ATOM   1590  O   THR A 206      50.257  46.691  13.989  1.00 20.39           O
ATOM   1591  CB  THR A 206      53.040  46.955  12.704  1.00 13.92           C
ATOM   1592  OG1 THR A 206      52.807  46.830  11.307  1.00 16.14           O
ATOM   1593  CG2 THR A 206      54.532  46.996  12.927  1.00 14.28           C
ATOM   1594  N   PRO A 207      50.233  45.085  12.390  1.00 18.42           N
ATOM   1595  CA  PRO A 207      48.776  45.274  12.314  1.00 18.12           C
ATOM   1596  C   PRO A 207      48.007  44.932  13.585  1.00 18.55           C
ATOM   1597  O   PRO A 207      48.387  44.035  14.342  1.00 20.21           O
ATOM   1598  CB  PRO A 207      48.364  44.455  11.079  1.00 18.43           C
ATOM   1599  CG  PRO A 207      49.516  43.549  10.817  1.00 22.93           C
ATOM   1600  CD  PRO A 207      50.731  44.296  11.250  1.00 19.41           C
ATOM   1601  N   MET A 208      46.985  45.735  13.867  1.00 19.69           N
ATOM   1602  CA  MET A 208      46.167  45.558  15.060  1.00 22.89           C
ATOM   1603  C   MET A 208      44.842  44.818  14.850  1.00 23.57           C
ATOM   1604  O   MET A 208      44.064  45.155  13.965  1.00 24.09           O
ATOM   1605  CB  MET A 208      45.938  46.912  15.714  1.00 26.60           C
ATOM   1606  CG  MET A 208      47.237  47.544  16.196  1.00 31.10           C
ATOM   1607  SD  MET A 208      47.031  49.225  16.734  1.00 38.41           S
ATOM   1608  CE  MET A 208      46.856  50.052  15.117  1.00 30.46           C
ATOM   1609  N   ARG A 209      44.606  43.806  15.683  1.00 24.01           N
ATOM   1610  CA  ARG A 209      43.404  42.986  15.609  1.00 23.35           C
ATOM   1611  C   ARG A 209      42.704  42.894  16.959  1.00 20.65           C
ATOM   1612  O   ARG A 209      43.300  43.137  17.991  1.00 23.21           O
ATOM   1613  CB  ARG A 209      43.752  41.574  15.127  1.00 22.36           C
ATOM   1614  CG  ARG A 209      44.373  41.506  13.747  1.00 22.27           C
ATOM   1615  CD  ARG A 209      43.478  42.171  12.721  1.00 24.97           C
ATOM   1616  NE  ARG A 209      43.993  42.041  11.354  1.00 24.14           N
ATOM   1617  CZ  ARG A 209      44.450  43.048  10.612  1.00 24.93           C
ATOM   1618  NH1 ARG A 209      44.474  44.280  11.100  1.00 19.88           N
ATOM   1619  NH2 ARG A 209      44.845  42.828   9.364  1.00 21.66           N
ATOM   1620  N   GLU A 210      41.432  42.521  16.929  1.00 20.87           N
ATOM   1621  CA  GLU A 210      40.615  42.377  18.132  1.00 22.49           C
ATOM   1622  C   GLU A 210      40.187  40.906  18.274  1.00 21.11           C
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ATOM   1623  O   GLU A 210      39.892  40.247  17.277  1.00 21.91           O
ATOM   1624  CB  GLU A 210      39.388  43.286  18.019  1.00 21.02           C
ATOM   1625  CG  GLU A 210      38.407  43.204  19.173  1.00 22.39           C
ATOM   1626  CD  GLU A 210      37.077  43.850  18.845  1.00 25.04           C
ATOM   1627  OE1 GLU A 210      36.739  43.955  17.650  1.00 26.31           O
ATOM   1628  OE2 GLU A 210      36.356  44.240  19.780  1.00 28.45           O
ATOM   1629  N   PHE A 211      40.175  40.395  19.503  1.00 16.25           N
ATOM   1630  CA  PHE A 211      39.819  39.004  19.757  1.00 19.95           C
ATOM   1631  C   PHE A 211      38.871  38.882  20.939  1.00 22.60           C
ATOM   1632  O   PHE A 211      39.025  39.567  21.947  1.00 26.81           O
ATOM   1633  CB  PHE A 211      41.082  38.167  20.017  1.00 18.58           C
ATOM   1634  CG  PHE A 211      42.070  38.218  18.904  1.00 18.94           C
ATOM   1635  CD1 PHE A 211      41.905  37.425  17.776  1.00 20.21           C
ATOM   1636  CD2 PHE A 211      43.139  39.112  18.951  1.00 18.84           C
ATOM   1637  CE1 PHE A 211      42.795  37.523  16.694  1.00 21.80           C
ATOM   1638  CE2 PHE A 211      44.032  39.222  17.885  1.00 20.46           C
ATOM   1639  CZ  PHE A 211      43.859  38.426  16.751  1.00 21.71           C
ATOM   1640  N   LEU A 212      37.902  37.985  20.815  1.00 22.66           N
ATOM   1641  CA  LEU A 212      36.916  37.766  21.861  1.00 21.98           C
ATOM   1642  C   LEU A 212      36.839  36.277  22.146  1.00 19.87           C
ATOM   1643  O   LEU A 212      36.788  35.468  21.215  1.00 21.14           O
ATOM   1644  CB  LEU A 212      35.541  38.270  21.397  1.00 19.65           C
ATOM   1645  CG  LEU A 212      34.419  38.209  22.430  1.00 20.98           C
ATOM   1646  CD1 LEU A 212      34.647  39.260  23.513  1.00 20.33           C
ATOM   1647  CD2 LEU A 212      33.089  38.423  21.756  1.00 20.71           C
ATOM   1648  N   HIS A 213      36.900  35.906  23.419  1.00 19.28           N
ATOM   1649  CA  HIS A 213      36.807  34.498  23.770  1.00 21.03           C
ATOM   1650  C   HIS A 213      35.367  34.052  23.509  1.00 22.30           C
ATOM   1651  O   HIS A 213      34.414  34.778  23.806  1.00 21.04           O
ATOM   1652  CB  HIS A 213      37.181  34.277  25.231  1.00 24.69           C
ATOM   1653  CG  HIS A 213      37.311  32.833  25.608  1.00 23.82           C
ATOM   1654  ND1 HIS A 213      36.223  31.997  25.752  1.00 27.73           N
ATOM   1655  CD2 HIS A 213      38.402  32.071  25.857  1.00 23.37           C
ATOM   1656  CE1 HIS A 213      36.637  30.785  26.072  1.00 24.29           C
ATOM   1657  NE2 HIS A 213      37.957  30.803  26.143  1.00 29.35           N
ATOM   1658  N   VAL A 214      35.213  32.857  22.953  1.00 24.86           N
ATOM   1659  CA  VAL A 214      33.902  32.325  22.614  1.00 23.50           C
ATOM   1660  C   VAL A 214      32.908  32.279  23.776  1.00 25.81           C
ATOM   1661  O   VAL A 214      31.708  32.393  23.551  1.00 30.16           O
ATOM   1662  CB  VAL A 214      34.021  30.952  21.926  1.00 23.75           C
ATOM   1663  CG1 VAL A 214      34.406  29.864  22.936  1.00 21.11           C
ATOM   1664  CG2 VAL A 214      32.741  30.633  21.175  1.00 22.22           C
ATOM   1665  N   ASP A 215      33.395  32.133  25.010  1.00 28.40           N
ATOM   1666  CA  ASP A 215      32.498  32.097  26.171  1.00 25.39           C
ATOM   1667  C   ASP A 215      31.910  33.468  26.437  1.00 24.44           C
ATOM   1668  O   ASP A 215      30.765  33.579  26.866  1.00 26.54           O
ATOM   1669  CB  ASP A 215      33.192  31.546  27.417  1.00 24.90           C
ATOM   1670  CG  ASP A 215      33.356  30.037  27.372  1.00 26.11           C
ATOM   1671  OD1 ASP A 215      32.653  29.357  26.596  1.00 24.29           O
ATOM   1672  OD2 ASP A 215      34.198  29.519  28.118  1.00 32.56           O
ATOM   1673  N   ASP A 216      32.697  34.511  26.200  1.00 22.75           N
ATOM   1674  CA  ASP A 216      32.198  35.867  26.356  1.00 24.56           C
ATOM   1675  C   ASP A 216      31.157  36.085  25.254  1.00 25.27           C
ATOM   1676  O   ASP A 216      30.129  36.710  25.470  1.00 27.67           O
ATOM   1677  CB  ASP A 216      33.321  36.883  26.180  1.00 25.84           C
ATOM   1678  CG  ASP A 216      33.898  37.364  27.493  1.00 28.85           C
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ATOM   1679  OD1 ASP A 216      33.213  37.280  28.542  1.00 33.73           O
ATOM   1680  OD2 ASP A 216      35.041  37.858  27.466  1.00 28.98           O
ATOM   1681  N   MET A 217      31.451  35.575  24.066  1.00 24.12           N
ATOM   1682  CA  MET A 217      30.560  35.690  22.923  1.00 25.65           C
ATOM   1683  C   MET A 217      29.191  35.102  23.279  1.00 25.73           C
ATOM   1684  O   MET A 217      28.159  35.753  23.078  1.00 24.41           O
ATOM   1685  CB  MET A 217      31.165  34.946  21.726  1.00 27.53           C
ATOM   1686  CG  MET A 217      30.228  34.747  20.547  1.00 31.62           C
ATOM   1687  SD  MET A 217      29.679  36.320  19.920  1.00 44.01           S
ATOM   1688  CE  MET A 217      28.255  35.789  19.016  1.00 46.67           C
ATOM   1689  N   ALA A 218      29.195  33.879  23.812  1.00 22.79           N
ATOM   1690  CA  ALA A 218      27.970  33.190  24.205  1.00 21.84           C
ATOM   1691  C   ALA A 218      27.178  34.003  25.241  1.00 24.89           C
ATOM   1692  O   ALA A 218      25.961  34.149  25.132  1.00 25.67           O
ATOM   1693  CB  ALA A 218      28.303  31.813  24.753  1.00 16.38           C
ATOM   1694  N   ALA A 219      27.888  34.559  26.220  1.00 24.44           N
ATOM   1695  CA  ALA A 219      27.273  35.360  27.270  1.00 23.73           C
ATOM   1696  C   ALA A 219      26.568  36.576  26.686  1.00 25.50           C
ATOM   1697  O   ALA A 219      25.418  36.843  27.026  1.00 28.52           O
ATOM   1698  CB  ALA A 219      28.321  35.794  28.294  1.00 19.48           C
ATOM   1699  N   ALA A 220      27.257  37.300  25.805  1.00 26.76           N
ATOM   1700  CA  ALA A 220      26.708  38.495  25.159  1.00 26.36           C
ATOM   1701  C   ALA A 220      25.503  38.158  24.291  1.00 26.65           C
ATOM   1702  O   ALA A 220      24.544  38.926  24.230  1.00 29.06           O
ATOM   1703  CB  ALA A 220      27.772  39.190  24.329  1.00 19.93           C
ATOM   1704  N   SER A 221      25.557  37.001  23.637  1.00 25.33           N
ATOM   1705  CA  SER A 221      24.470  36.539  22.778  1.00 25.73           C
ATOM   1706  C   SER A 221      23.191  36.321  23.592  1.00 24.91           C
ATOM   1707  O   SER A 221      22.110  36.784  23.212  1.00 26.36           O
ATOM   1708  CB  SER A 221      24.869  35.234  22.084  1.00 21.96           C
ATOM   1709  OG  SER A 221      25.940  35.450  21.190  1.00 28.74           O
ATOM   1710  N   ILE A 222      23.327  35.590  24.697  1.00 25.18           N
ATOM   1711  CA  ILE A 222      22.217  35.298  25.594  1.00 25.39           C
ATOM   1712  C   ILE A 222      21.694  36.595  26.211  1.00 27.95           C
ATOM   1713  O   ILE A 222      20.487  36.760  26.377  1.00 31.54           O
ATOM   1714  CB  ILE A 222      22.656  34.313  26.693  1.00 26.29           C
ATOM   1715  CG1 ILE A 222      23.061  32.983  26.041  1.00 25.32           C
ATOM   1716  CG2 ILE A 222      21.539  34.109  27.717  1.00 21.77           C
ATOM   1717  CD1 ILE A 222      23.872  32.066  26.932  1.00 27.56           C
ATOM   1718  N   HIS A 223      22.604  37.528  26.490  1.00 26.17           N
ATOM   1719  CA  HIS A 223      22.250  38.818  27.067  1.00 25.32           C
ATOM   1720  C   HIS A 223      21.360  39.592  26.088  1.00 29.35           C
ATOM   1721  O   HIS A 223      20.286  40.071  26.457  1.00 29.65           O
ATOM   1722  CB  HIS A 223      23.520  39.620  27.383  1.00 22.98           C
ATOM   1723  CG  HIS A 223      23.258  41.011  27.883  1.00 25.35           C
ATOM   1724  ND1 HIS A 223      23.116  41.310  29.220  1.00 26.58           N
ATOM   1725  CD2 HIS A 223      23.104  42.183  27.220  1.00 24.11           C
ATOM   1726  CE1 HIS A 223      22.886  42.604  29.359  1.00 25.33           C
ATOM   1727  NE2 HIS A 223      22.872  43.157  28.160  1.00 23.16           N
ATOM   1728  N   VAL A 224      21.824  39.715  24.845  1.00 28.95           N
ATOM   1729  CA  VAL A 224      21.081  40.414  23.800  1.00 25.81           C
ATOM   1730  C   VAL A 224      19.742  39.718  23.519  1.00 26.93           C
ATOM   1731  O   VAL A 224      18.711  40.381  23.395  1.00 27.47           O
ATOM   1732  CB  VAL A 224      21.924  40.536  22.504  1.00 26.98           C
ATOM   1733  CG1 VAL A 224      21.064  41.047  21.332  1.00 23.82           C
ATOM   1734  CG2 VAL A 224      23.101  41.482  22.746  1.00 22.87           C
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ATOM   1735  N   MET A 225      19.754  38.388  23.449  1.00 25.71           N
ATOM   1736  CA  MET A 225      18.532  37.622  23.214  1.00 26.60           C
ATOM   1737  C   MET A 225      17.466  37.875  24.302  1.00 30.38           C
ATOM   1738  O   MET A 225      16.289  38.069  24.003  1.00 29.38           O
ATOM   1739  CB  MET A 225      18.860  36.131  23.181  1.00 24.01           C
ATOM   1740  CG  MET A 225      17.647  35.234  23.091  1.00 22.08           C
ATOM   1741  SD  MET A 225      16.751  35.402  21.544  1.00 26.66           S
ATOM   1742  CE  MET A 225      16.662  33.712  20.994  1.00 15.44           C
ATOM   1743  N   GLU A 226      17.902  37.915  25.558  1.00 30.39           N
ATOM   1744  CA  GLU A 226      16.996  38.092  26.686  1.00 31.31           C
ATOM   1745  C   GLU A 226      16.658  39.503  27.120  1.00 32.01           C
ATOM   1746  O   GLU A 226      15.851  39.694  28.020  1.00 35.73           O
ATOM   1747  CB  GLU A 226      17.480  37.262  27.867  1.00 28.65           C
ATOM   1748  CG  GLU A 226      17.387  35.790  27.561  1.00 27.91           C
ATOM   1749  CD  GLU A 226      17.943  34.917  28.649  1.00 33.83           C
ATOM   1750  OE1 GLU A 226      18.624  35.438  29.563  1.00 33.18           O
ATOM   1751  OE2 GLU A 226      17.703  33.695  28.574  1.00 34.27           O
ATOM   1752  N   LEU A 227      17.242  40.491  26.462  1.00 32.89           N
ATOM   1753  CA  LEU A 227      16.963  41.892  26.769  1.00 33.35           C
ATOM   1754  C   LEU A 227      15.474  42.160  26.500  1.00 35.07           C
ATOM   1755  O   LEU A 227      14.854  41.497  25.656  1.00 31.47           O
ATOM   1756  CB  LEU A 227      17.787  42.779  25.833  1.00 34.51           C
ATOM   1757  CG  LEU A 227      18.657  43.878  26.413  1.00 36.70           C
ATOM   1758  CD1 LEU A 227      19.595  43.289  27.441  1.00 40.83           C
ATOM   1759  CD2 LEU A 227      19.430  44.514  25.286  1.00 38.83           C
ATOM   1760  N   ALA A 228      14.907  43.140  27.197  1.00 36.67           N
ATOM   1761  CA  ALA A 228      13.499  43.495  26.993  1.00 37.05           C
ATOM   1762  C   ALA A 228      13.354  44.095  25.596  1.00 34.00           C
ATOM   1763  O   ALA A 228      14.185  44.903  25.173  1.00 32.74           O
ATOM   1764  CB  ALA A 228      13.032  44.504  28.055  1.00 32.56           C
ATOM   1765  N   HIS A 229      12.293  43.705  24.896  1.00 32.47           N
ATOM   1766  CA  HIS A 229      12.037  44.197  23.549  1.00 34.11           C
ATOM   1767  C   HIS A 229      12.073  45.717  23.434  1.00 33.05           C
ATOM   1768  O   HIS A 229      12.669  46.234  22.491  1.00 35.43           O
ATOM   1769  CB  HIS A 229      10.708  43.666  23.020  1.00 35.19           C
ATOM   1770  CG  HIS A 229      10.559  43.798  21.538  1.00 39.63           C
ATOM   1771  ND1 HIS A 229       9.396  44.235  20.941  1.00 40.64           N
ATOM   1772  CD2 HIS A 229      11.427  43.543  20.529  1.00 38.95           C
ATOM   1773  CE1 HIS A 229       9.554  44.240  19.629  1.00 42.35           C
ATOM   1774  NE2 HIS A 229      10.778  43.825  19.353  1.00 37.81           N
ATOM   1775  N   GLU A 230      11.487  46.426  24.405  1.00 33.10           N
ATOM   1776  CA  GLU A 230      11.477  47.896  24.382  1.00 35.45           C
ATOM   1777  C   GLU A 230      12.872  48.463  24.500  1.00 30.25           C
ATOM   1778  O   GLU A 230      13.160  49.511  23.922  1.00 30.21           O
ATOM   1779  CB  GLU A 230      10.645  48.503  25.513  1.00 42.34           C
ATOM   1780  CG  GLU A 230       9.312  47.851  25.753  1.00 60.32           C
ATOM   1781  CD  GLU A 230       9.259  47.157  27.102  1.00 69.92           C
ATOM   1782  OE1 GLU A 230       9.966  47.606  28.042  1.00 72.25           O
ATOM   1783  OE2 GLU A 230       8.508  46.164  27.222  1.00 75.41           O
ATOM   1784  N   VAL A 231      13.711  47.804  25.297  1.00 25.92           N
ATOM   1785  CA  VAL A 231      15.088  48.244  25.496  1.00 27.64           C
ATOM   1786  C   VAL A 231      15.922  48.063  24.224  1.00 27.94           C
ATOM   1787  O   VAL A 231      16.743  48.920  23.876  1.00 26.76           O
ATOM   1788  CB  VAL A 231      15.736  47.499  26.670  1.00 30.32           C
ATOM   1789  CG1 VAL A 231      17.209  47.882  26.794  1.00 29.06           C
ATOM   1790  CG2 VAL A 231      14.984  47.823  27.966  1.00 29.47           C
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ATOM   1791  N   TRP A 232      15.676  46.954  23.526  1.00 27.62           N
ATOM   1792  CA  TRP A 232      16.361  46.634  22.274  1.00 27.79           C
ATOM   1793  C   TRP A 232      15.939  47.590  21.146  1.00 28.62           C
ATOM   1794  O   TRP A 232      16.788  48.094  20.410  1.00 27.71           O
ATOM   1795  CB  TRP A 232      16.064  45.188  21.877  1.00 27.06           C
ATOM   1796  CG  TRP A 232      16.727  44.743  20.601  1.00 30.83           C
ATOM   1797  CD1 TRP A 232      18.028  44.359  20.451  1.00 29.38           C
ATOM   1798  CD2 TRP A 232      16.121  44.628  19.304  1.00 28.58           C
ATOM   1799  NE1 TRP A 232      18.271  44.013  19.146  1.00 29.58           N
ATOM   1800  CE2 TRP A 232      17.122  44.169  18.419  1.00 27.18           C
ATOM   1801  CE3 TRP A 232      14.835  44.866  18.805  1.00 28.32           C
ATOM   1802  CZ2 TRP A 232      16.881  43.945  17.064  1.00 22.72           C
ATOM   1803  CZ3 TRP A 232      14.595  44.643  17.457  1.00 30.94           C
ATOM   1804  CH2 TRP A 232      15.617  44.186  16.601  1.00 28.09           C
ATOM   1805  N   LEU A 233      14.632  47.845  21.025  1.00 27.44           N
ATOM   1806  CA  LEU A 233      14.108  48.749  19.998  1.00 27.68           C
ATOM   1807  C   LEU A 233      14.664  50.148  20.190  1.00 28.22           C
ATOM   1808  O   LEU A 233      14.941  50.860  19.226  1.00 31.02           O
ATOM   1809  CB  LEU A 233      12.583  48.813  20.068  1.00 27.39           C
ATOM   1810  CG  LEU A 233      11.805  47.560  19.678  1.00 24.97           C
ATOM   1811  CD1 LEU A 233      10.369  47.738  20.094  1.00 28.86           C
ATOM   1812  CD2 LEU A 233      11.920  47.311  18.180  1.00 23.30           C
ATOM   1813  N   GLU A 234      14.839  50.515  21.453  1.00 32.02           N
ATOM   1814  CA  GLU A 234      15.344  51.820  21.852  1.00 35.27           C
ATOM   1815  C   GLU A 234      16.803  52.020  21.454  1.00 34.15           C
ATOM   1816  O   GLU A 234      17.217  53.139  21.140  1.00 33.71           O
ATOM   1817  CB  GLU A 234      15.190  51.968  23.364  1.00 40.08           C
ATOM   1818  CG  GLU A 234      15.501  53.337  23.925  1.00 52.17           C
ATOM   1819  CD  GLU A 234      15.628  53.309  25.446  1.00 63.51           C
ATOM   1820  OE1 GLU A 234      14.722  52.758  26.117  1.00 64.39           O
ATOM   1821  OE2 GLU A 234      16.644  53.827  25.970  1.00 68.40           O
ATOM   1822  N   ASN A 235      17.575  50.934  21.448  1.00 35.23           N
ATOM   1823  CA  ASN A 235      18.993  51.007  21.091  1.00 35.47           C
ATOM   1824  C   ASN A 235      19.377  50.541  19.698  1.00 33.31           C
ATOM   1825  O   ASN A 235      20.560  50.368  19.418  1.00 35.10           O
ATOM   1826  CB  ASN A 235      19.848  50.280  22.121  1.00 38.19           C
ATOM   1827  CG  ASN A 235      19.905  51.013  23.435  1.00 42.27           C
ATOM   1828  OD1 ASN A 235      19.058  50.805  24.307  1.00 42.41           O
ATOM   1829  ND2 ASN A 235      20.890  51.901  23.578  1.00 41.04           N
ATOM   1830  N   THR A 236      18.383  50.300  18.848  1.00 28.54           N
ATOM   1831  CA  THR A 236      18.622  49.882  17.472  1.00 26.96           C
ATOM   1832  C   THR A 236      17.610  50.585  16.572  1.00 29.20           C
ATOM   1833  O   THR A 236      16.777  51.365  17.042  1.00 31.34           O
ATOM   1834  CB  THR A 236      18.433  48.357  17.279  1.00 26.03           C
ATOM   1835  OG1 THR A 236      17.098  48.002  17.627  1.00 23.38           O
ATOM   1836  CG2 THR A 236      19.388  47.556  18.143  1.00 22.89           C
ATOM   1837  N   GLN A 237      17.710  50.326  15.273  1.00 29.06           N
ATOM   1838  CA  GLN A 237      16.791  50.884  14.291  1.00 29.54           C
ATOM   1839  C   GLN A 237      16.272  49.706  13.483  1.00 30.42           C
ATOM   1840  O   GLN A 237      16.981  48.732  13.278  1.00 30.34           O
ATOM   1841  CB  GLN A 237      17.498  51.869  13.379  1.00 30.42           C
ATOM   1842  CG  GLN A 237      17.835  53.164  14.045  1.00 38.67           C
ATOM   1843  CD  GLN A 237      19.194  53.641  13.635  1.00 46.94           C
ATOM   1844  OE1 GLN A 237      20.198  53.233  14.218  1.00 55.63           O
ATOM   1845  NE2 GLN A 237      19.250  54.474  12.599  1.00 47.31           N
ATOM   1846  N   PRO A 238      15.033  49.792  12.985  1.00 31.03           N
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ATOM   1847  CA  PRO A 238      14.457  48.693  12.206  1.00 27.75           C
ATOM   1848  C   PRO A 238      15.306  48.183  11.050  1.00 26.12           C
ATOM   1849  O   PRO A 238      15.328  46.978  10.783  1.00 26.87           O
ATOM   1850  CB  PRO A 238      13.134  49.284  11.724  1.00 30.90           C
ATOM   1851  CG  PRO A 238      12.769  50.220  12.847  1.00 31.53           C
ATOM   1852  CD  PRO A 238      14.082  50.911  13.088  1.00 31.48           C
ATOM   1853  N   MET A 239      15.996  49.086  10.364  1.00 19.01           N
ATOM   1854  CA  MET A 239      16.810  48.665   9.236  1.00 20.33           C
ATOM   1855  C   MET A 239      18.317  48.745   9.492  1.00 21.00           C
ATOM   1856  O   MET A 239      19.117  48.762   8.562  1.00 22.39           O
ATOM   1857  CB  MET A 239      16.406  49.427   7.971  1.00 19.82           C
ATOM   1858  CG  MET A 239      14.969  49.130   7.518  1.00 22.16           C
ATOM   1859  SD  MET A 239      14.467  50.055   6.063  1.00 23.20           S
ATOM   1860  CE  MET A 239      14.938  48.921   4.744  1.00 22.85           C
ATOM   1861  N   LEU A 240      18.686  48.789  10.766  1.00 17.67           N
ATOM   1862  CA  LEU A 240      20.080  48.810  11.197  1.00 18.19           C
ATOM   1863  C   LEU A 240      19.999  48.244  12.614  1.00 18.81           C
ATOM   1864  O   LEU A 240      20.310  48.918  13.595  1.00 21.40           O
ATOM   1865  CB  LEU A 240      20.634  50.236  11.205  1.00 17.63           C
ATOM   1866  CG  LEU A 240      22.169  50.283  11.243  1.00 20.48           C
ATOM   1867  CD1 LEU A 240      22.717  49.854   9.888  1.00 20.33           C
ATOM   1868  CD2 LEU A 240      22.658  51.677  11.592  1.00 23.50           C
ATOM   1869  N   SER A 241      19.580  46.985  12.699  1.00 18.42           N
ATOM   1870  CA  SER A 241      19.346  46.301  13.975  1.00 20.15           C
ATOM   1871  C   SER A 241      20.448  45.447  14.608  1.00 22.66           C
ATOM   1872  O   SER A 241      20.302  45.021  15.757  1.00 20.00           O
ATOM   1873  CB  SER A 241      18.119  45.410  13.814  1.00 19.66           C
ATOM   1874  OG  SER A 241      18.365  44.419  12.822  1.00 19.00           O
ATOM   1875  N   HIS A 242      21.502  45.135  13.857  1.00 21.08           N
ATOM   1876  CA  HIS A 242      22.562  44.286  14.386  1.00 19.45           C
ATOM   1877  C   HIS A 242      23.374  44.985  15.464  1.00 21.16           C
ATOM   1878  O   HIS A 242      23.468  46.210  15.485  1.00 19.25           O
ATOM   1879  CB  HIS A 242      23.470  43.789  13.251  1.00 18.39           C
ATOM   1880  CG  HIS A 242      24.070  44.889  12.435  1.00 21.00           C
ATOM   1881  ND1 HIS A 242      25.394  45.258  12.540  1.00 24.57           N
ATOM   1882  CD2 HIS A 242      23.524  45.705  11.504  1.00 18.15           C
ATOM   1883  CE1 HIS A 242      25.640  46.253  11.706  1.00 20.48           C
ATOM   1884  NE2 HIS A 242      24.521  46.543  11.066  1.00 25.00           N
ATOM   1885  N   ILE A 243      23.919  44.198  16.387  1.00 24.11           N
ATOM   1886  CA  ILE A 243      24.742  44.733  17.471  1.00 24.72           C
ATOM   1887  C   ILE A 243      26.132  44.086  17.458  1.00 23.73           C
ATOM   1888  O   ILE A 243      26.256  42.861  17.438  1.00 19.93           O
ATOM   1889  CB  ILE A 243      24.064  44.509  18.845  1.00 25.81           C
ATOM   1890  CG1 ILE A 243      22.759  45.313  18.910  1.00 27.38           C
ATOM   1891  CG2 ILE A 243      25.001  44.911  19.992  1.00 21.68           C
ATOM   1892  CD1 ILE A 243      21.816  44.845  19.991  1.00 27.41           C
ATOM   1893  N   ASN A 244      27.168  44.923  17.403  1.00 22.92           N
ATOM   1894  CA  ASN A 244      28.556  44.458  17.405  1.00 22.89           C
ATOM   1895  C   ASN A 244      28.874  43.824  18.753  1.00 23.74           C
ATOM   1896  O   ASN A 244      28.457  44.336  19.794  1.00 25.96           O
ATOM   1897  CB  ASN A 244      29.530  45.627  17.177  1.00 18.05           C
ATOM   1898  CG  ASN A 244      29.581  46.082  15.727  1.00 19.87           C
ATOM   1899  OD1 ASN A 244      29.221  45.336  14.805  1.00 18.82           O
ATOM   1900  ND2 ASN A 244      30.033  47.317  15.517  1.00 16.28           N
ATOM   1901  N   VAL A 245      29.602  42.713  18.734  1.00 21.85           N
ATOM   1902  CA  VAL A 245      29.992  42.034  19.967  1.00 21.80           C
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ATOM   1903  C   VAL A 245      31.513  41.812  19.920  1.00 22.59           C
ATOM   1904  O   VAL A 245      32.026  41.140  19.023  1.00 21.49           O
ATOM   1905  CB  VAL A 245      29.235  40.682  20.145  1.00 23.76           C
ATOM   1906  CG1 VAL A 245      29.683  39.976  21.421  1.00 24.00           C
ATOM   1907  CG2 VAL A 245      27.742  40.916  20.200  1.00 21.35           C
ATOM   1908  N   GLY A 246      32.222  42.438  20.857  1.00 22.67           N
ATOM   1909  CA  GLY A 246      33.669  42.322  20.930  1.00 24.28           C
ATOM   1910  C   GLY A 246      34.195  42.991  22.183  1.00 24.67           C
ATOM   1911  O   GLY A 246      33.422  43.310  23.084  1.00 25.15           O
ATOM   1912  N   THR A 247      35.503  43.225  22.238  1.00 27.41           N
ATOM   1913  CA  THR A 247      36.130  43.859  23.406  1.00 29.81           C
ATOM   1914  C   THR A 247      36.382  45.365  23.225  1.00 30.14           C
ATOM   1915  O   THR A 247      36.457  46.109  24.204  1.00 30.54           O
ATOM   1916  CB  THR A 247      37.488  43.190  23.760  1.00 27.35           C
ATOM   1917  OG1 THR A 247      38.407  43.386  22.683  1.00 28.01           O
ATOM   1918  CG2 THR A 247      37.317  41.696  24.002  1.00 24.20           C
ATOM   1919  N   GLY A 248      36.522  45.800  21.975  1.00 31.26           N
ATOM   1920  CA  GLY A 248      36.786  47.201  21.690  1.00 31.54           C
ATOM   1921  C   GLY A 248      38.254  47.544  21.899  1.00 33.40           C
ATOM   1922  O   GLY A 248      38.674  48.692  21.768  1.00 33.52           O
ATOM   1923  N   VAL A 249      39.035  46.529  22.246  1.00 36.86           N
ATOM   1924  CA  VAL A 249      40.463  46.682  22.493  1.00 33.66           C
ATOM   1925  C   VAL A 249      41.214  45.934  21.413  1.00 31.50           C
ATOM   1926  O   VAL A 249      40.867  44.808  21.076  1.00 29.41           O
ATOM   1927  CB  VAL A 249      40.853  46.064  23.854  1.00 31.90           C
ATOM   1928  CG1 VAL A 249      42.351  46.142  24.066  1.00 35.19           C
ATOM   1929  CG2 VAL A 249      40.120  46.774  24.976  1.00 34.14           C
ATOM   1930  N   ASP A 250      42.205  46.583  20.824  1.00 29.71           N
ATOM   1931  CA  ASP A 250      43.009  45.915  19.821  1.00 29.00           C
ATOM   1932  C   ASP A 250      44.439  45.705  20.324  1.00 30.13           C
ATOM   1933  O   ASP A 250      44.849  46.277  21.343  1.00 28.85           O
ATOM   1934  CB  ASP A 250      42.985  46.665  18.481  1.00 32.68           C
ATOM   1935  CG  ASP A 250      43.353  48.140  18.602  1.00 37.15           C
ATOM   1936  OD1 ASP A 250      43.761  48.607  19.691  1.00 41.60           O
ATOM   1937  OD2 ASP A 250      43.228  48.839  17.573  1.00 38.27           O
ATOM   1938  N   CYS A 251      45.144  44.783  19.679  1.00 27.09           N
ATOM   1939  CA  CYS A 251      46.527  44.500  20.012  1.00 26.39           C
ATOM   1940  C   CYS A 251      47.207  44.065  18.725  1.00 24.62           C
ATOM   1941  O   CYS A 251      46.555  43.548  17.805  1.00 26.47           O
ATOM   1942  CB  CYS A 251      46.644  43.422  21.107  1.00 31.27           C
ATOM   1943  SG  CYS A 251      46.375  41.702  20.593  1.00 31.15           S
ATOM   1944  N   THR A 252      48.506  44.330  18.638  1.00 22.64           N
ATOM   1945  CA  THR A 252      49.285  43.977  17.460  1.00 17.62           C
ATOM   1946  C   THR A 252      49.486  42.469  17.352  1.00 16.92           C
ATOM   1947  O   THR A 252      49.380  41.730  18.337  1.00 19.18           O
ATOM   1948  CB  THR A 252      50.670  44.663  17.489  1.00 15.13           C
ATOM   1949  OG1 THR A 252      51.416  44.196  18.620  1.00 16.21           O
ATOM   1950  CG2 THR A 252      50.515  46.170  17.601  1.00 12.20           C
ATOM   1951  N   ILE A 253      49.763  42.015  16.139  1.00 19.17           N
ATOM   1952  CA  ILE A 253      50.029  40.598  15.897  1.00 18.46           C
ATOM   1953  C   ILE A 253      51.295  40.212  16.689  1.00 19.42           C
ATOM   1954  O   ILE A 253      51.404  39.099  17.211  1.00 23.05           O
ATOM   1955  CB  ILE A 253      50.224  40.310  14.377  1.00 16.55           C
ATOM   1956  CG1 ILE A 253      48.971  40.716  13.606  1.00 16.12           C
ATOM   1957  CG2 ILE A 253      50.528  38.845  14.141  1.00 16.01           C
ATOM   1958  CD1 ILE A 253      47.705  40.184  14.230  1.00 19.29           C
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ATOM   1959  N   ARG A 254      52.228  41.153  16.804  1.00 17.56           N
ATOM   1960  CA  ARG A 254      53.462  40.937  17.546  1.00 18.20           C
ATOM   1961  C   ARG A 254      53.115  40.625  19.005  1.00 17.58           C
ATOM   1962  O   ARG A 254      53.564  39.623  19.568  1.00 15.25           O
ATOM   1963  CB  ARG A 254      54.342  42.191  17.406  1.00 19.12           C
ATOM   1964  CG  ARG A 254      55.220  42.558  18.585  1.00 23.71           C
ATOM   1965  CD  ARG A 254      56.626  42.051  18.456  1.00 26.61           C
ATOM   1966  NE  ARG A 254      57.260  42.440  17.198  1.00 27.30           N
ATOM   1967  CZ  ARG A 254      58.429  41.954  16.780  1.00 27.42           C
ATOM   1968  NH1 ARG A 254      59.105  41.092  17.532  1.00 24.96           N
ATOM   1969  NH2 ARG A 254      58.844  42.201  15.546  1.00 27.33           N
ATOM   1970  N   GLU A 255      52.254  41.446  19.593  1.00 16.75           N
ATOM   1971  CA  GLU A 255      51.859  41.230  20.974  1.00 18.00           C
ATOM   1972  C   GLU A 255      51.137  39.902  21.168  1.00 20.69           C
ATOM   1973  O   GLU A 255      51.319  39.233  22.191  1.00 21.51           O
ATOM   1974  CB  GLU A 255      50.979  42.365  21.473  1.00 18.59           C
ATOM   1975  CG  GLU A 255      50.433  42.080  22.862  1.00 26.70           C
ATOM   1976  CD  GLU A 255      49.841  43.290  23.545  1.00 33.63           C
ATOM   1977  OE1 GLU A 255      49.602  44.321  22.881  1.00 37.03           O
ATOM   1978  OE2 GLU A 255      49.612  43.204  24.764  1.00 39.07           O
ATOM   1979  N   LEU A 256      50.297  39.542  20.196  1.00 18.67           N
ATOM   1980  CA  LEU A 256      49.550  38.290  20.232  1.00 17.89           C
ATOM   1981  C   LEU A 256      50.494  37.083  20.199  1.00 17.20           C
ATOM   1982  O   LEU A 256      50.412  36.193  21.052  1.00 19.20           O
ATOM   1983  CB  LEU A 256      48.587  38.224  19.046  1.00 15.29           C
ATOM   1984  CG  LEU A 256      47.818  36.912  18.914  1.00 18.94           C
ATOM   1985  CD1 LEU A 256      46.805  36.771  20.047  1.00 16.63           C
ATOM   1986  CD2 LEU A 256      47.144  36.850  17.561  1.00 19.21           C
ATOM   1987  N   ALA A 257      51.398  37.073  19.220  1.00 16.95           N
ATOM   1988  CA  ALA A 257      52.372  35.993  19.050  1.00 16.80           C
ATOM   1989  C   ALA A 257      53.271  35.821  20.280  1.00 17.32           C
ATOM   1990  O   ALA A 257      53.568  34.703  20.716  1.00 19.66           O
ATOM   1991  CB  ALA A 257      53.228  36.277  17.813  1.00 15.44           C
ATOM   1992  N   GLN A 258      53.703  36.950  20.829  1.00 18.58           N
ATOM   1993  CA  GLN A 258      54.574  36.985  21.994  1.00 18.94           C
ATOM   1994  C   GLN A 258      53.837  36.478  23.230  1.00 18.06           C
ATOM   1995  O   GLN A 258      54.430  35.821  24.091  1.00 16.85           O
ATOM   1996  CB  GLN A 258      55.052  38.424  22.204  1.00 23.68           C
ATOM   1997  CG  GLN A 258      56.528  38.593  22.420  1.00 30.17           C
ATOM   1998  CD  GLN A 258      57.394  38.018  21.303  1.00 29.06           C
ATOM   1999  OE1 GLN A 258      57.537  38.599  20.219  1.00 25.75           O
ATOM   2000  NE2 GLN A 258      58.037  36.906  21.600  1.00 26.88           N
ATOM   2001  N   THR A 259      52.544  36.784  23.317  1.00 18.69           N
ATOM   2002  CA  THR A 259      51.733  36.337  24.458  1.00 19.69           C
ATOM   2003  C   THR A 259      51.492  34.821  24.365  1.00 21.07           C
ATOM   2004  O   THR A 259      51.574  34.107  25.365  1.00 24.98           O
ATOM   2005  CB  THR A 259      50.390  37.119  24.559  1.00 17.98           C
ATOM   2006  OG1 THR A 259      50.661  38.509  24.798  1.00 19.59           O
ATOM   2007  CG2 THR A 259      49.531  36.582  25.694  1.00 12.32           C
ATOM   2008  N   ILE A 260      51.225  34.334  23.153  1.00 20.32           N
ATOM   2009  CA  ILE A 260      51.020  32.906  22.928  1.00 18.40           C
ATOM   2010  C   ILE A 260      52.314  32.163  23.264  1.00 18.29           C
ATOM   2011  O   ILE A 260      52.276  31.133  23.935  1.00 23.03           O
ATOM   2012  CB  ILE A 260      50.590  32.626  21.467  1.00 19.08           C
ATOM   2013  CG1 ILE A 260      49.154  33.103  21.266  1.00 17.88           C
ATOM   2014  CG2 ILE A 260      50.718  31.144  21.130  1.00 18.63           C
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ATOM   2015  CD1 ILE A 260      48.645  32.954  19.845  1.00 19.67           C
ATOM   2016  N   ALA A 261      53.453  32.700  22.828  1.00 15.86           N
ATOM   2017  CA  ALA A 261      54.751  32.092  23.114  1.00 15.07           C
ATOM   2018  C   ALA A 261      54.900  31.901  24.617  1.00 18.31           C
ATOM   2019  O   ALA A 261      55.300  30.829  25.078  1.00 21.16           O
ATOM   2020  CB  ALA A 261      55.876  32.963  22.595  1.00 12.21           C
ATOM   2021  N   LYS A 262      54.567  32.939  25.378  1.00 18.14           N
ATOM   2022  CA  LYS A 262      54.655  32.884  26.831  1.00 16.87           C
ATOM   2023  C   LYS A 262      53.698  31.834  27.421  1.00 21.94           C
ATOM   2024  O   LYS A 262      54.099  31.024  28.258  1.00 23.55           O
ATOM   2025  CB  LYS A 262      54.359  34.262  27.424  1.00 20.72           C
ATOM   2026  CG  LYS A 262      54.286  34.286  28.956  1.00 25.19           C
ATOM   2027  CD  LYS A 262      53.674  35.582  29.460  1.00 37.48           C
ATOM   2028  CE  LYS A 262      53.272  35.495  30.935  1.00 44.21           C
ATOM   2029  NZ  LYS A 262      52.634  36.770  31.409  1.00 48.78           N
ATOM   2030  N   VAL A 263      52.438  31.857  26.988  1.00 19.95           N
ATOM   2031  CA  VAL A 263      51.420  30.919  27.460  1.00 20.58           C
ATOM   2032  C   VAL A 263      51.831  29.448  27.238  1.00 22.00           C
ATOM   2033  O   VAL A 263      51.623  28.581  28.088  1.00 19.34           O
ATOM   2034  CB  VAL A 263      50.046  31.218  26.754  1.00 19.39           C
ATOM   2035  CG1 VAL A 263      49.056  30.073  26.936  1.00 16.70           C
ATOM   2036  CG2 VAL A 263      49.454  32.496  27.312  1.00 17.88           C
ATOM   2037  N   VAL A 264      52.436  29.185  26.091  1.00 20.64           N
ATOM   2038  CA  VAL A 264      52.849  27.847  25.732  1.00 21.28           C
ATOM   2039  C   VAL A 264      54.170  27.409  26.390  1.00 24.03           C
ATOM   2040  O   VAL A 264      54.443  26.216  26.507  1.00 25.06           O
ATOM   2041  CB  VAL A 264      52.892  27.738  24.194  1.00 20.52           C
ATOM   2042  CG1 VAL A 264      53.616  26.499  23.751  1.00 27.46           C
ATOM   2043  CG2 VAL A 264      51.465  27.734  23.656  1.00 19.97           C
ATOM   2044  N   GLY A 265      54.940  28.371  26.891  1.00 22.67           N
ATOM   2045  CA  GLY A 265      56.213  28.057  27.509  1.00 23.29           C
ATOM   2046  C   GLY A 265      57.329  27.947  26.483  1.00 25.65           C
ATOM   2047  O   GLY A 265      58.329  27.264  26.714  1.00 26.53           O
ATOM   2048  N   TYR A 266      57.156  28.612  25.343  1.00 25.58           N
ATOM   2049  CA  TYR A 266      58.152  28.584  24.278  1.00 24.54           C
ATOM   2050  C   TYR A 266      59.340  29.454  24.673  1.00 24.99           C
ATOM   2051  O   TYR A 266      59.156  30.584  25.127  1.00 24.52           O
ATOM   2052  CB  TYR A 266      57.542  29.073  22.963  1.00 22.49           C
ATOM   2053  CG  TYR A 266      58.510  29.051  21.807  1.00 19.00           C
ATOM   2054  CD1 TYR A 266      59.169  27.871  21.451  1.00 22.48           C
ATOM   2055  CD2 TYR A 266      58.788  30.209  21.084  1.00 17.81           C
ATOM   2056  CE1 TYR A 266      60.089  27.844  20.402  1.00 20.47           C
ATOM   2057  CE2 TYR A 266      59.703  30.195  20.033  1.00 17.70           C
ATOM   2058  CZ  TYR A 266      60.350  29.008  19.700  1.00 21.27           C
ATOM   2059  OH  TYR A 266      61.263  28.983  18.669  1.00 22.27           O
ATOM   2060  N   LYS A 267      60.551  28.920  24.509  1.00 25.64           N
ATOM   2061  CA  LYS A 267      61.766  29.647  24.881  1.00 27.14           C
ATOM   2062  C   LYS A 267      62.572  30.148  23.699  1.00 26.30           C
ATOM   2063  O   LYS A 267      63.564  30.852  23.881  1.00 30.44           O
ATOM   2064  CB  LYS A 267      62.684  28.773  25.733  1.00 28.63           C
ATOM   2065  CG  LYS A 267      62.115  28.330  27.052  1.00 30.53           C
ATOM   2066  CD  LYS A 267      61.994  29.458  28.010  1.00 27.17           C
ATOM   2067  CE  LYS A 267      61.705  28.911  29.387  1.00 33.31           C
ATOM   2068  NZ  LYS A 267      61.524  30.028  30.362  1.00 40.44           N
ATOM   2069  N   GLY A 268      62.185  29.753  22.496  1.00 25.10           N
ATOM   2070  CA  GLY A 268      62.908  30.201  21.320  1.00 23.55           C
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ATOM   2071  C   GLY A 268      62.619  31.650  20.978  1.00 24.88           C
ATOM   2072  O   GLY A 268      62.099  32.417  21.792  1.00 24.02           O
ATOM   2073  N   ARG A 269      62.950  32.022  19.750  1.00 24.86           N
ATOM   2074  CA  ARG A 269      62.735  33.377  19.286  1.00 25.94           C
ATOM   2075  C   ARG A 269      61.558  33.484  18.342  1.00 23.02           C
ATOM   2076  O   ARG A 269      61.336  32.607  17.526  1.00 20.55           O
ATOM   2077  CB  ARG A 269      63.994  33.904  18.593  1.00 27.44           C
ATOM   2078  CG  ARG A 269      65.000  34.525  19.557  1.00 37.34           C
ATOM   2079  CD  ARG A 269      65.858  35.587  18.860  1.00 50.39           C
ATOM   2080  NE  ARG A 269      65.068  36.564  18.088  1.00 59.23           N
ATOM   2081  CZ  ARG A 269      64.196  37.440  18.604  1.00 60.47           C
ATOM   2082  NH1 ARG A 269      63.989  37.504  19.922  1.00 58.26           N
ATOM   2083  NH2 ARG A 269      63.537  38.270  17.793  1.00 55.93           N
ATOM   2084  N   VAL A 270      60.766  34.535  18.511  1.00 23.13           N
ATOM   2085  CA  VAL A 270      59.632  34.792  17.630  1.00 23.60           C
ATOM   2086  C   VAL A 270      60.178  35.771  16.588  1.00 23.02           C
ATOM   2087  O   VAL A 270      60.712  36.819  16.924  1.00 26.13           O
ATOM   2088  CB  VAL A 270      58.433  35.422  18.387  1.00 26.15           C
ATOM   2089  CG1 VAL A 270      57.320  35.802  17.392  1.00 19.20           C
ATOM   2090  CG2 VAL A 270      57.906  34.440  19.441  1.00 15.68           C
ATOM   2091  N   VAL A 271      60.098  35.405  15.320  1.00 26.09           N
ATOM   2092  CA  VAL A 271      60.628  36.261  14.269  1.00 23.58           C
ATOM   2093  C   VAL A 271      59.567  36.643  13.235  1.00 24.79           C
ATOM   2094  O   VAL A 271      58.837  35.786  12.727  1.00 27.62           O
ATOM   2095  CB  VAL A 271      61.826  35.556  13.538  1.00 24.40           C
ATOM   2096  CG1 VAL A 271      62.425  36.465  12.463  1.00 21.77           C
ATOM   2097  CG2 VAL A 271      62.902  35.124  14.547  1.00 17.00           C
ATOM   2098  N   PHE A 272      59.473  37.939  12.948  1.00 25.21           N
ATOM   2099  CA  PHE A 272      58.538  38.433  11.943  1.00 22.09           C
ATOM   2100  C   PHE A 272      59.288  38.722  10.666  1.00 22.63           C
ATOM   2101  O   PHE A 272      60.293  39.426  10.678  1.00 26.84           O
ATOM   2102  CB  PHE A 272      57.800  39.675  12.434  1.00 17.47           C
ATOM   2103  CG  PHE A 272      56.657  39.352  13.332  1.00 19.08           C
ATOM   2104  CD1 PHE A 272      55.397  39.094  12.798  1.00 20.72           C
ATOM   2105  CD2 PHE A 272      56.845  39.228  14.702  1.00 14.99           C
ATOM   2106  CE1 PHE A 272      54.341  38.712  13.622  1.00 22.36           C
ATOM   2107  CE2 PHE A 272      55.799  38.846  15.534  1.00 19.04           C
ATOM   2108  CZ  PHE A 272      54.545  38.585  14.997  1.00 18.63           C
ATOM   2109  N   ASP A 273      58.859  38.087   9.585  1.00 21.71           N
ATOM   2110  CA  ASP A 273      59.479  38.276   8.291  1.00 21.05           C
ATOM   2111  C   ASP A 273      58.739  39.419   7.608  1.00 21.52           C
ATOM   2112  O   ASP A 273      57.683  39.221   7.005  1.00 23.03           O
ATOM   2113  CB  ASP A 273      59.380  36.984   7.477  1.00 22.70           C
ATOM   2114  CG  ASP A 273      60.125  37.062   6.159  1.00 23.85           C
ATOM   2115  OD1 ASP A 273      60.469  38.175   5.712  1.00 25.22           O
ATOM   2116  OD2 ASP A 273      60.359  36.005   5.550  1.00 31.35           O
ATOM   2117  N   ALA A 274      59.306  40.618   7.701  1.00 23.17           N
ATOM   2118  CA  ALA A 274      58.698  41.820   7.119  1.00 22.99           C
ATOM   2119  C   ALA A 274      58.742  41.907   5.600  1.00 22.46           C
ATOM   2120  O   ALA A 274      58.314  42.906   5.032  1.00 23.10           O
ATOM   2121  CB  ALA A 274      59.321  43.077   7.731  1.00 21.48           C
ATOM   2122  N   SER A 275      59.316  40.899   4.946  1.00 22.96           N
ATOM   2123  CA  SER A 275      59.375  40.895   3.487  1.00 25.11           C
ATOM   2124  C   SER A 275      58.027  40.422   2.915  1.00 25.06           C
ATOM   2125  O   SER A 275      57.810  40.458   1.707  1.00 29.16           O
ATOM   2126  CB  SER A 275      60.523  40.008   2.987  1.00 23.74           C
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ATOM   2127  OG  SER A 275      60.223  38.632   3.132  1.00 23.99           O
ATOM   2128  N   LYS A 276      57.144  39.965   3.803  1.00 22.01           N
ATOM   2129  CA  LYS A 276      55.816  39.502   3.439  1.00 22.01           C
ATOM   2130  C   LYS A 276      54.870  40.632   3.803  1.00 24.73           C
ATOM   2131  O   LYS A 276      55.055  41.299   4.816  1.00 23.25           O
ATOM   2132  CB  LYS A 276      55.447  38.259   4.234  1.00 19.15           C
ATOM   2133  CG  LYS A 276      56.423  37.122   4.070  1.00 23.43           C
ATOM   2134  CD  LYS A 276      56.360  36.545   2.694  1.00 19.29           C
ATOM   2135  CE  LYS A 276      57.294  35.377   2.575  1.00 19.32           C
ATOM   2136  NZ  LYS A 276      57.030  34.700   1.281  1.00 20.62           N
ATOM   2137  N   PRO A 277      53.828  40.848   2.988  1.00 27.74           N
ATOM   2138  CA  PRO A 277      52.840  41.909   3.212  1.00 25.57           C
ATOM   2139  C   PRO A 277      51.945  41.721   4.432  1.00 25.62           C
ATOM   2140  O   PRO A 277      51.745  40.606   4.917  1.00 25.00           O
ATOM   2141  CB  PRO A 277      52.021  41.871   1.931  1.00 26.37           C
ATOM   2142  CG  PRO A 277      52.032  40.386   1.592  1.00 28.94           C
ATOM   2143  CD  PRO A 277      53.485  40.046   1.796  1.00 28.55           C
ATOM   2144  N   ASP A 278      51.466  42.839   4.961  1.00 25.93           N
ATOM   2145  CA  ASP A 278      50.557  42.823   6.098  1.00 27.14           C
ATOM   2146  C   ASP A 278      49.165  42.983   5.520  1.00 28.69           C
ATOM   2147  O   ASP A 278      49.010  43.296   4.341  1.00 29.84           O
ATOM   2148  CB  ASP A 278      50.808  44.016   7.022  1.00 25.70           C
ATOM   2149  CG  ASP A 278      52.077  43.886   7.830  1.00 29.46           C
ATOM   2150  OD1 ASP A 278      52.269  42.841   8.484  1.00 30.78           O
ATOM   2151  OD2 ASP A 278      52.861  44.856   7.849  1.00 31.84           O
ATOM   2152  N   GLY A 279      48.150  42.755   6.346  1.00 33.85           N
ATOM   2153  CA  GLY A 279      46.785  42.959   5.891  1.00 35.02           C
ATOM   2154  C   GLY A 279      46.497  44.415   6.207  1.00 33.99           C
ATOM   2155  O   GLY A 279      47.422  45.235   6.236  1.00 33.76           O
ATOM   2156  N   THR A 280      45.236  44.753   6.458  1.00 36.26           N
ATOM   2157  CA  THR A 280      44.893  46.133   6.803  1.00 34.69           C
ATOM   2158  C   THR A 280      45.559  46.438   8.147  1.00 33.02           C
ATOM   2159  O   THR A 280      45.689  45.559   9.009  1.00 31.79           O
ATOM   2160  CB  THR A 280      43.367  46.349   6.867  1.00 36.65           C
ATOM   2161  OG1 THR A 280      42.787  45.386   7.755  1.00 39.09           O
ATOM   2162  CG2 THR A 280      42.749  46.188   5.471  1.00 40.33           C
ATOM   2163  N   PRO A 281      45.997  47.686   8.337  1.00 31.08           N
ATOM   2164  CA  PRO A 281      46.670  48.121   9.565  1.00 32.40           C
ATOM   2165  C   PRO A 281      45.898  47.914  10.859  1.00 30.92           C
ATOM   2166  O   PRO A 281      46.474  47.578  11.891  1.00 30.49           O
ATOM   2167  CB  PRO A 281      46.894  49.621   9.320  1.00 31.76           C
ATOM   2168  CG  PRO A 281      46.865  49.751   7.834  1.00 32.42           C
ATOM   2169  CD  PRO A 281      45.753  48.833   7.448  1.00 29.66           C
ATOM   2170  N   ARG A 282      44.585  48.083  10.787  1.00 31.53           N
ATOM   2171  CA  ARG A 282      43.754  47.995  11.974  1.00 32.15           C
ATOM   2172  C   ARG A 282      42.355  47.487  11.654  1.00 30.49           C
ATOM   2173  O   ARG A 282      41.781  47.807  10.617  1.00 32.66           O
ATOM   2174  CB  ARG A 282      43.685  49.391  12.593  1.00 31.82           C
ATOM   2175  CG  ARG A 282      43.141  49.443  13.979  1.00 34.24           C
ATOM   2176  CD  ARG A 282      43.421  50.805  14.558  1.00 38.29           C
ATOM   2177  NE  ARG A 282      42.928  50.914  15.922  1.00 41.55           N
ATOM   2178  CZ  ARG A 282      42.125  51.885  16.347  1.00 44.61           C
ATOM   2179  NH1 ARG A 282      41.725  52.836  15.508  1.00 44.61           N
ATOM   2180  NH2 ARG A 282      41.706  51.894  17.603  1.00 43.85           N
ATOM   2181  N   LYS A 283      41.809  46.690  12.556  1.00 30.16           N
ATOM   2182  CA  LYS A 283      40.486  46.150  12.357  1.00 27.63           C
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ATOM   2183  C   LYS A 283      39.894  45.799  13.718  1.00 28.84           C
ATOM   2184  O   LYS A 283      40.387  44.905  14.408  1.00 31.61           O
ATOM   2185  CB  LYS A 283      40.576  44.921  11.456  1.00 27.98           C
ATOM   2186  CG  LYS A 283      39.273  44.486  10.834  1.00 37.70           C
ATOM   2187  CD  LYS A 283      39.450  43.206  10.041  1.00 48.15           C
ATOM   2188  CE  LYS A 283      38.117  42.477   9.870  1.00 58.89           C
ATOM   2189  NZ  LYS A 283      38.292  41.105   9.311  1.00 63.83           N
ATOM   2190  N   LEU A 284      38.930  46.602  14.160  1.00 27.13           N
ATOM   2191  CA  LEU A 284      38.235  46.351  15.424  1.00 26.74           C
ATOM   2192  C   LEU A 284      36.846  46.975  15.391  1.00 24.56           C
ATOM   2193  O   LEU A 284      36.586  47.902  14.628  1.00 24.46           O
ATOM   2194  CB  LEU A 284      39.013  46.856  16.643  1.00 27.79           C
ATOM   2195  CG  LEU A 284      38.943  48.326  17.029  1.00 29.30           C
ATOM   2196  CD1 LEU A 284      39.421  48.471  18.456  1.00 25.87           C
ATOM   2197  CD2 LEU A 284      39.770  49.171  16.073  1.00 31.37           C
ATOM   2198  N   LEU A 285      35.954  46.436  16.209  1.00 23.49           N
ATOM   2199  CA  LEU A 285      34.579  46.899  16.281  1.00 23.39           C
ATOM   2200  C   LEU A 285      34.335  47.995  17.313  1.00 25.11           C
ATOM   2201  O   LEU A 285      35.015  48.082  18.339  1.00 27.85           O
ATOM   2202  CB  LEU A 285      33.649  45.725  16.628  1.00 17.63           C
ATOM   2203  CG  LEU A 285      33.598  44.474  15.763  1.00 15.00           C
ATOM   2204  CD1 LEU A 285      32.609  43.474  16.375  1.00 15.44           C
ATOM   2205  CD2 LEU A 285      33.204  44.850  14.349  1.00 15.47           C
ATOM   2206  N   ASP A 286      33.345  48.828  17.022  1.00 25.66           N
ATOM   2207  CA  ASP A 286      32.916  49.867  17.933  1.00 25.25           C
ATOM   2208  C   ASP A 286      31.832  49.112  18.720  1.00 25.87           C
ATOM   2209  O   ASP A 286      30.847  48.633  18.147  1.00 24.18           O
ATOM   2210  CB  ASP A 286      32.310  51.024  17.136  1.00 29.44           C
ATOM   2211  CG  ASP A 286      31.971  52.223  17.999  1.00 31.06           C
ATOM   2212  OD1 ASP A 286      31.528  52.034  19.149  1.00 27.73           O
ATOM   2213  OD2 ASP A 286      32.144  53.359  17.514  1.00 34.89           O
ATOM   2214  N   VAL A 287      32.042  48.949  20.019  1.00 26.35           N
ATOM   2215  CA  VAL A 287      31.084  48.220  20.831  1.00 25.91           C
ATOM   2216  C   VAL A 287      30.259  49.097  21.771  1.00 27.64           C
ATOM   2217  O   VAL A 287      29.694  48.610  22.756  1.00 29.27           O
ATOM   2218  CB  VAL A 287      31.787  47.078  21.593  1.00 28.95           C
ATOM   2219  CG1 VAL A 287      32.270  46.023  20.600  1.00 27.85           C
ATOM   2220  CG2 VAL A 287      32.977  47.622  22.367  1.00 29.30           C
ATOM   2221  N   THR A 288      30.154  50.379  21.419  1.00 29.70           N
ATOM   2222  CA  THR A 288      29.390  51.380  22.177  1.00 28.48           C
ATOM   2223  C   THR A 288      27.951  50.932  22.436  1.00 29.29           C
ATOM   2224  O   THR A 288      27.478  50.972  23.568  1.00 32.29           O
ATOM   2225  CB  THR A 288      29.325  52.707  21.406  1.00 28.48           C
ATOM   2226  OG1 THR A 288      30.637  53.261  21.288  1.00 27.75           O
ATOM   2227  CG2 THR A 288      28.423  53.690  22.115  1.00 31.20           C
ATOM   2228  N   ARG A 289      27.273  50.512  21.370  1.00 28.56           N
ATOM   2229  CA  ARG A 289      25.893  50.051  21.425  1.00 25.44           C
ATOM   2230  C   ARG A 289      25.736  48.907  22.433  1.00 28.20           C
ATOM   2231  O   ARG A 289      24.858  48.936  23.299  1.00 27.08           O
ATOM   2232  CB  ARG A 289      25.454  49.614  20.023  1.00 24.80           C
ATOM   2233  CG  ARG A 289      23.963  49.476  19.838  1.00 28.12           C
ATOM   2234  CD  ARG A 289      23.585  48.976  18.447  1.00 30.30           C
ATOM   2235  NE  ARG A 289      23.274  50.048  17.491  1.00 31.95           N
ATOM   2236  CZ  ARG A 289      22.534  49.877  16.388  1.00 36.11           C
ATOM   2237  NH1 ARG A 289      22.023  48.681  16.100  1.00 31.94           N
ATOM   2238  NH2 ARG A 289      22.308  50.897  15.555  1.00 35.50           N
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ATOM   2239  N   LEU A 290      26.631  47.926  22.354  1.00 30.63           N
ATOM   2240  CA  LEU A 290      26.589  46.782  23.259  1.00 30.83           C
ATOM   2241  C   LEU A 290      26.827  47.197  24.707  1.00 31.36           C
ATOM   2242  O   LEU A 290      26.175  46.693  25.621  1.00 28.39           O
ATOM   2243  CB  LEU A 290      27.620  45.729  22.851  1.00 29.98           C
ATOM   2244  CG  LEU A 290      27.698  44.516  23.780  1.00 30.44           C
ATOM   2245  CD1 LEU A 290      26.384  43.735  23.766  1.00 26.66           C
ATOM   2246  CD2 LEU A 290      28.878  43.643  23.388  1.00 33.51           C
ATOM   2247  N   HIS A 291      27.784  48.095  24.910  1.00 32.98           N
ATOM   2248  CA  HIS A 291      28.107  48.577  26.248  1.00 35.96           C
ATOM   2249  C   HIS A 291      26.942  49.368  26.835  1.00 39.26           C
ATOM   2250  O   HIS A 291      26.644  49.254  28.029  1.00 39.62           O
ATOM   2251  CB  HIS A 291      29.386  49.407  26.215  1.00 34.49           C
ATOM   2252  CG  HIS A 291      30.624  48.582  26.059  1.00 33.27           C
ATOM   2253  ND1 HIS A 291      31.869  49.134  25.840  1.00 32.89           N
ATOM   2254  CD2 HIS A 291      30.809  47.239  26.102  1.00 26.67           C
ATOM   2255  CE1 HIS A 291      32.768  48.167  25.756  1.00 31.57           C
ATOM   2256  NE2 HIS A 291      32.149  47.009  25.911  1.00 30.81           N
ATOM   2257  N   GLN A 292      26.249  50.121  25.981  1.00 39.60           N
ATOM   2258  CA  GLN A 292      25.094  50.882  26.427  1.00 40.94           C
ATOM   2259  C   GLN A 292      23.959  49.937  26.808  1.00 37.83           C
ATOM   2260  O   GLN A 292      23.108  50.292  27.609  1.00 37.10           O
ATOM   2261  CB  GLN A 292      24.651  51.878  25.361  1.00 44.00           C
ATOM   2262  CG  GLN A 292      25.597  53.070  25.256  1.00 51.59           C
ATOM   2263  CD  GLN A 292      25.192  54.069  24.174  1.00 58.20           C
ATOM   2264  OE1 GLN A 292      25.544  55.252  24.248  1.00 58.41           O
ATOM   2265  NE2 GLN A 292      24.465  53.595  23.156  1.00 57.53           N
ATOM   2266  N   LEU A 293      23.973  48.727  26.251  1.00 35.06           N
ATOM   2267  CA  LEU A 293      22.966  47.716  26.564  1.00 31.20           C
ATOM   2268  C   LEU A 293      23.355  46.972  27.848  1.00 31.87           C
ATOM   2269  O   LEU A 293      22.741  45.957  28.218  1.00 28.32           O
ATOM   2270  CB  LEU A 293      22.823  46.726  25.412  1.00 33.88           C
ATOM   2271  CG  LEU A 293      22.183  47.239  24.124  1.00 37.17           C
ATOM   2272  CD1 LEU A 293      22.203  46.139  23.092  1.00 35.04           C
ATOM   2273  CD2 LEU A 293      20.757  47.677  24.390  1.00 39.47           C
ATOM   2274  N   GLY A 294      24.423  47.452  28.484  1.00 33.62           N
ATOM   2275  CA  GLY A 294      24.891  46.879  29.737  1.00 34.29           C
ATOM   2276  C   GLY A 294      25.719  45.604  29.749  1.00 33.47           C
ATOM   2277  O   GLY A 294      25.724  44.883  30.746  1.00 33.94           O
ATOM   2278  N   TRP A 295      26.417  45.306  28.662  1.00 32.35           N
ATOM   2279  CA  TRP A 295      27.241  44.111  28.644  1.00 29.88           C
ATOM   2280  C   TRP A 295      28.687  44.446  28.375  1.00 30.10           C
ATOM   2281  O   TRP A 295      28.996  45.204  27.454  1.00 31.06           O
ATOM   2282  CB  TRP A 295      26.763  43.104  27.604  1.00 26.98           C
ATOM   2283  CG  TRP A 295      27.473  41.787  27.730  1.00 28.14           C
ATOM   2284  CD1 TRP A 295      27.090  40.722  28.491  1.00 25.99           C
ATOM   2285  CD2 TRP A 295      28.694  41.398  27.077  1.00 25.65           C
ATOM   2286  NE1 TRP A 295      27.992  39.693  28.351  1.00 29.60           N
ATOM   2287  CE2 TRP A 295      28.985  40.082  27.489  1.00 25.20           C
ATOM   2288  CE3 TRP A 295      29.565  42.036  26.181  1.00 26.80           C
ATOM   2289  CZ2 TRP A 295      30.108  39.389  27.037  1.00 24.14           C
ATOM   2290  CZ3 TRP A 295      30.678  41.349  25.732  1.00 22.64           C
ATOM   2291  CH2 TRP A 295      30.940  40.036  26.161  1.00 24.17           C
ATOM   2292  N   TYR A 296      29.560  43.862  29.190  1.00 29.32           N
ATOM   2293  CA  TYR A 296      31.005  44.033  29.077  1.00 28.77           C
ATOM   2294  C   TYR A 296      31.659  42.651  29.158  1.00 29.73           C
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ATOM   2295  O   TYR A 296      31.201  41.785  29.916  1.00 30.95           O
ATOM   2296  CB  TYR A 296      31.526  44.932  30.194  1.00 28.63           C
ATOM   2297  CG  TYR A 296      31.191  46.388  30.010  1.00 35.13           C
ATOM   2298  CD1 TYR A 296      29.952  46.906  30.416  1.00 35.72           C
ATOM   2299  CD2 TYR A 296      32.114  47.259  29.435  1.00 37.60           C
ATOM   2300  CE1 TYR A 296      29.641  48.260  30.250  1.00 37.06           C
ATOM   2301  CE2 TYR A 296      31.817  48.616  29.268  1.00 42.99           C
ATOM   2302  CZ  TYR A 296      30.582  49.112  29.676  1.00 43.71           C
ATOM   2303  OH  TYR A 296      30.314  50.458  29.501  1.00 47.05           O
ATOM   2304  N   HIS A 297      32.695  42.433  28.348  1.00 29.71           N
ATOM   2305  CA  HIS A 297      33.396  41.153  28.328  1.00 32.32           C
ATOM   2306  C   HIS A 297      34.166  40.957  29.617  1.00 34.54           C
ATOM   2307  O   HIS A 297      34.608  41.930  30.227  1.00 32.74           O
ATOM   2308  CB  HIS A 297      34.358  41.077  27.144  1.00 33.25           C
ATOM   2309  CG  HIS A 297      35.472  42.070  27.209  1.00 33.45           C
ATOM   2310  ND1 HIS A 297      35.274  43.422  27.025  1.00 34.24           N
ATOM   2311  CD2 HIS A 297      36.797  41.911  27.438  1.00 31.57           C
ATOM   2312  CE1 HIS A 297      36.430  44.053  27.136  1.00 31.26           C
ATOM   2313  NE2 HIS A 297      37.370  43.159  27.386  1.00 28.92           N
ATOM   2314  N   GLU A 298      34.337  39.697  30.009  1.00 35.11           N
ATOM   2315  CA  GLU A 298      35.050  39.354  31.233  1.00 38.13           C
ATOM   2316  C   GLU A 298      36.411  38.696  31.039  1.00 36.62           C
ATOM   2317  O   GLU A 298      37.288  38.818  31.893  1.00 39.28           O
ATOM   2318  CB  GLU A 298      34.195  38.435  32.099  1.00 42.57           C
ATOM   2319  CG  GLU A 298      32.984  39.116  32.700  1.00 56.55           C
ATOM   2320  CD  GLU A 298      32.192  38.188  33.596  1.00 63.39           C
ATOM   2321  OE1 GLU A 298      32.626  37.965  34.747  1.00 69.05           O
ATOM   2322  OE2 GLU A 298      31.142  37.676  33.150  1.00 67.36           O
ATOM   2323  N   ILE A 299      36.590  38.005  29.920  1.00 33.15           N
ATOM   2324  CA  ILE A 299      37.829  37.289  29.657  1.00 28.71           C
ATOM   2325  C   ILE A 299      38.899  38.075  28.912  1.00 30.47           C
ATOM   2326  O   ILE A 299      38.712  38.461  27.756  1.00 29.27           O
ATOM   2327  CB  ILE A 299      37.523  35.973  28.927  1.00 26.40           C
ATOM   2328  CG1 ILE A 299      36.569  35.127  29.785  1.00 24.94           C
ATOM   2329  CG2 ILE A 299      38.793  35.225  28.631  1.00 24.43           C
ATOM   2330  CD1 ILE A 299      35.864  33.994  29.039  1.00 26.53           C
ATOM   2331  N   SER A 300      40.025  38.304  29.590  1.00 30.54           N
ATOM   2332  CA  SER A 300      41.159  39.025  28.999  1.00 30.46           C
ATOM   2333  C   SER A 300      41.938  38.078  28.076  1.00 28.34           C
ATOM   2334  O   SER A 300      41.867  36.852  28.218  1.00 28.24           O
ATOM   2335  CB  SER A 300      42.096  39.546  30.087  1.00 27.63           C
ATOM   2336  OG  SER A 300      42.755  38.464  30.725  1.00 34.47           O
ATOM   2337  N   LEU A 301      42.733  38.653  27.180  1.00 28.69           N
ATOM   2338  CA  LEU A 301      43.495  37.869  26.221  1.00 27.42           C
ATOM   2339  C   LEU A 301      44.406  36.790  26.818  1.00 29.59           C
ATOM   2340  O   LEU A 301      44.315  35.627  26.425  1.00 28.46           O
ATOM   2341  CB  LEU A 301      44.297  38.791  25.303  1.00 26.04           C
ATOM   2342  CG  LEU A 301      44.982  38.076  24.132  1.00 30.13           C
ATOM   2343  CD1 LEU A 301      43.940  37.536  23.150  1.00 24.15           C
ATOM   2344  CD2 LEU A 301      45.924  39.020  23.431  1.00 30.75           C
ATOM   2345  N   GLU A 302      45.259  37.166  27.772  1.00 30.96           N
ATOM   2346  CA  GLU A 302      46.193  36.224  28.387  1.00 33.25           C
ATOM   2347  C   GLU A 302      45.449  35.068  29.033  1.00 29.75           C
ATOM   2348  O   GLU A 302      45.797  33.903  28.813  1.00 28.90           O
ATOM   2349  CB  GLU A 302      47.072  36.904  29.445  1.00 40.61           C
ATOM   2350  CG  GLU A 302      47.527  38.323  29.119  1.00 58.01           C
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ATOM   2351  CD  GLU A 302      46.440  39.379  29.381  1.00 65.75           C
ATOM   2352  OE1 GLU A 302      45.931  39.444  30.532  1.00 72.24           O
ATOM   2353  OE2 GLU A 302      46.102  40.140  28.439  1.00 63.01           O
ATOM   2354  N   ALA A 303      44.425  35.403  29.824  1.00 24.88           N
ATOM   2355  CA  ALA A 303      43.606  34.408  30.526  1.00 24.71           C
ATOM   2356  C   ALA A 303      42.865  33.484  29.560  1.00 25.54           C
ATOM   2357  O   ALA A 303      42.791  32.271  29.789  1.00 29.66           O
ATOM   2358  CB  ALA A 303      42.616  35.098  31.458  1.00 21.89           C
ATOM   2359  N   GLY A 304      42.340  34.057  28.476  1.00 23.60           N
ATOM   2360  CA  GLY A 304      41.615  33.276  27.488  1.00 22.00           C
ATOM   2361  C   GLY A 304      42.518  32.350  26.698  1.00 24.00           C
ATOM   2362  O   GLY A 304      42.111  31.247  26.326  1.00 24.61           O
ATOM   2363  N   LEU A 305      43.735  32.806  26.415  1.00 22.18           N
ATOM   2364  CA  LEU A 305      44.695  31.997  25.675  1.00 22.81           C
ATOM   2365  C   LEU A 305      45.192  30.854  26.550  1.00 23.51           C
ATOM   2366  O   LEU A 305      45.345  29.724  26.083  1.00 21.91           O
ATOM   2367  CB  LEU A 305      45.862  32.854  25.187  1.00 23.16           C
ATOM   2368  CG  LEU A 305      45.563  33.826  24.040  1.00 22.90           C
ATOM   2369  CD1 LEU A 305      46.771  34.725  23.816  1.00 23.25           C
ATOM   2370  CD2 LEU A 305      45.210  33.054  22.767  1.00 19.28           C
ATOM   2371  N   ALA A 306      45.407  31.140  27.829  1.00 22.44           N
ATOM   2372  CA  ALA A 306      45.863  30.114  28.755  1.00 23.30           C
ATOM   2373  C   ALA A 306      44.805  29.003  28.904  1.00 25.38           C
ATOM   2374  O   ALA A 306      45.127  27.813  28.799  1.00 27.64           O
ATOM   2375  CB  ALA A 306      46.200  30.735  30.107  1.00 17.87           C
ATOM   2376  N   SER A 307      43.538  29.376  29.097  1.00 25.23           N
ATOM   2377  CA  SER A 307      42.491  28.366  29.242  1.00 26.15           C
ATOM   2378  C   SER A 307      42.228  27.591  27.948  1.00 25.13           C
ATOM   2379  O   SER A 307      41.934  26.392  27.983  1.00 28.37           O
ATOM   2380  CB  SER A 307      41.196  28.980  29.785  1.00 25.82           C
ATOM   2381  OG  SER A 307      40.598  29.852  28.850  1.00 34.44           O
ATOM   2382  N   THR A 308      42.322  28.275  26.812  1.00 22.65           N
ATOM   2383  CA  THR A 308      42.126  27.643  25.505  1.00 22.04           C
ATOM   2384  C   THR A 308      43.255  26.631  25.264  1.00 23.92           C
ATOM   2385  O   THR A 308      43.024  25.565  24.687  1.00 25.72           O
ATOM   2386  CB  THR A 308      42.165  28.693  24.348  1.00 21.15           C
ATOM   2387  OG1 THR A 308      41.155  29.685  24.552  1.00 19.89           O
ATOM   2388  CG2 THR A 308      41.939  28.030  23.008  1.00 17.69           C
ATOM   2389  N   TYR A 309      44.481  26.987  25.665  1.00 25.33           N
ATOM   2390  CA  TYR A 309      45.636  26.102  25.493  1.00 26.21           C
ATOM   2391  C   TYR A 309      45.420  24.846  26.330  1.00 26.41           C
ATOM   2392  O   TYR A 309      45.711  23.730  25.898  1.00 23.91           O
ATOM   2393  CB  TYR A 309      46.944  26.787  25.918  1.00 23.36           C
ATOM   2394  CG  TYR A 309      48.166  25.943  25.605  1.00 21.24           C
ATOM   2395  CD1 TYR A 309      48.328  25.367  24.340  1.00 18.75           C
ATOM   2396  CD2 TYR A 309      49.131  25.681  26.582  1.00 21.27           C
ATOM   2397  CE1 TYR A 309      49.411  24.551  24.052  1.00 19.56           C
ATOM   2398  CE2 TYR A 309      50.223  24.866  26.311  1.00 17.57           C
ATOM   2399  CZ  TYR A 309      50.361  24.302  25.045  1.00 21.33           C
ATOM   2400  OH  TYR A 309      51.456  23.502  24.767  1.00 20.21           O
ATOM   2401  N   GLN A 310      44.897  25.056  27.531  1.00 27.89           N
ATOM   2402  CA  GLN A 310      44.594  23.978  28.451  1.00 31.81           C
ATOM   2403  C   GLN A 310      43.607  23.018  27.789  1.00 31.36           C
ATOM   2404  O   GLN A 310      43.820  21.810  27.808  1.00 33.37           O
ATOM   2405  CB  GLN A 310      44.006  24.560  29.734  1.00 38.01           C
ATOM   2406  CG  GLN A 310      44.110  23.639  30.916  1.00 51.59           C
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ATOM   2407  CD  GLN A 310      45.498  23.054  31.042  1.00 60.30           C
ATOM   2408  OE1 GLN A 310      45.655  21.839  31.196  1.00 64.67           O
ATOM   2409  NE2 GLN A 310      46.521  23.908  30.930  1.00 60.71           N
ATOM   2410  N   TRP A 311      42.554  23.556  27.166  1.00 30.58           N
ATOM   2411  CA  TRP A 311      41.565  22.721  26.482  1.00 29.94           C
ATOM   2412  C   TRP A 311      42.243  21.969  25.333  1.00 30.11           C
ATOM   2413  O   TRP A 311      41.993  20.779  25.134  1.00 31.81           O
ATOM   2414  CB  TRP A 311      40.389  23.560  25.940  1.00 26.63           C
ATOM   2415  CG  TRP A 311      39.327  22.736  25.219  1.00 27.45           C
ATOM   2416  CD1 TRP A 311      38.227  22.153  25.782  1.00 25.65           C
ATOM   2417  CD2 TRP A 311      39.311  22.352  23.828  1.00 25.38           C
ATOM   2418  NE1 TRP A 311      37.539  21.423  24.841  1.00 27.93           N
ATOM   2419  CE2 TRP A 311      38.182  21.525  23.635  1.00 25.85           C
ATOM   2420  CE3 TRP A 311      40.145  22.617  22.734  1.00 24.20           C
ATOM   2421  CZ2 TRP A 311      37.866  20.961  22.397  1.00 26.13           C
ATOM   2422  CZ3 TRP A 311      39.831  22.053  21.501  1.00 26.01           C
ATOM   2423  CH2 TRP A 311      38.701  21.234  21.344  1.00 27.42           C
ATOM   2424  N   PHE A 312      43.064  22.678  24.558  1.00 31.15           N
ATOM   2425  CA  PHE A 312      43.790  22.071  23.443  1.00 29.26           C
ATOM   2426  C   PHE A 312      44.630  20.871  23.913  1.00 31.45           C
ATOM   2427  O   PHE A 312      44.669  19.841  23.233  1.00 30.12           O
ATOM   2428  CB  PHE A 312      44.700  23.094  22.758  1.00 28.80           C
ATOM   2429  CG  PHE A 312      45.604  22.489  21.727  1.00 29.23           C
ATOM   2430  CD1 PHE A 312      45.090  22.051  20.509  1.00 29.28           C
ATOM   2431  CD2 PHE A 312      46.960  22.296  21.996  1.00 30.23           C
ATOM   2432  CE1 PHE A 312      45.907  21.423  19.571  1.00 30.71           C
ATOM   2433  CE2 PHE A 312      47.789  21.669  21.067  1.00 29.70           C
ATOM   2434  CZ  PHE A 312      47.261  21.231  19.852  1.00 27.73           C
ATOM   2435  N   LEU A 313      45.291  21.006  25.068  1.00 31.69           N
ATOM   2436  CA  LEU A 313      46.119  19.933  25.631  1.00 33.26           C
ATOM   2437  C   LEU A 313      45.330  18.661  25.939  1.00 35.99           C
ATOM   2438  O   LEU A 313      45.790  17.558  25.652  1.00 38.67           O
ATOM   2439  CB  LEU A 313      46.855  20.401  26.891  1.00 26.85           C
ATOM   2440  CG  LEU A 313      48.001  21.388  26.663  1.00 27.01           C
ATOM   2441  CD1 LEU A 313      48.648  21.781  27.985  1.00 25.82           C
ATOM   2442  CD2 LEU A 313      49.020  20.769  25.729  1.00 20.94           C
ATOM   2443  N   GLU A 314      44.131  18.814  26.490  1.00 38.83           N
ATOM   2444  CA  GLU A 314      43.291  17.666  26.817  1.00 42.85           C
ATOM   2445  C   GLU A 314      42.578  17.057  25.606  1.00 42.97           C
ATOM   2446  O   GLU A 314      42.068  15.944  25.682  1.00 45.49           O
ATOM   2447  CB  GLU A 314      42.256  18.067  27.862  1.00 46.26           C
ATOM   2448  CG  GLU A 314      42.863  18.587  29.151  1.00 56.81           C
ATOM   2449  CD  GLU A 314      41.852  19.291  30.054  1.00 64.34           C
ATOM   2450  OE1 GLU A 314      40.679  19.464  29.644  1.00 67.08           O
ATOM   2451  OE2 GLU A 314      42.241  19.686  31.179  1.00 67.29           O
ATOM   2452  N   ASN A 315      42.579  17.766  24.483  1.00 43.89           N
ATOM   2453  CA  ASN A 315      41.893  17.296  23.284  1.00 42.94           C
ATOM   2454  C   ASN A 315      42.754  17.260  22.050  1.00 46.04           C
ATOM   2455  O   ASN A 315      42.219  17.283  20.944  1.00 45.53           O
ATOM   2456  CB  ASN A 315      40.711  18.213  22.978  1.00 40.44           C
ATOM   2457  CG  ASN A 315      39.601  18.086  23.983  1.00 41.48           C
ATOM   2458  OD1 ASN A 315      38.661  17.316  23.781  1.00 44.84           O
ATOM   2459  ND2 ASN A 315      39.693  18.841  25.072  1.00 37.23           N
ATOM   2460  N   GLN A 316      44.071  17.201  22.209  1.00 52.36           N
ATOM   2461  CA  GLN A 316      44.925  17.219  21.029  1.00 59.50           C
ATOM   2462  C   GLN A 316      44.820  16.005  20.123  1.00 64.25           C
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ATOM   2463  O   GLN A 316      45.172  16.080  18.942  1.00 64.94           O
ATOM   2464  CB  GLN A 316      46.376  17.549  21.379  1.00 58.71           C
ATOM   2465  CG  GLN A 316      47.016  16.649  22.393  1.00 59.40           C
ATOM   2466  CD  GLN A 316      48.429  17.084  22.718  1.00 59.51           C
ATOM   2467  OE1 GLN A 316      48.777  17.256  23.884  1.00 60.21           O
ATOM   2468  NE2 GLN A 316      49.251  17.271  21.686  1.00 56.65           N
ATOM   2469  N   ASP A 317      44.312  14.897  20.658  1.00 71.12           N
ATOM   2470  CA  ASP A 317      44.142  13.698  19.846  1.00 77.85           C
ATOM   2471  C   ASP A 317      42.781  13.744  19.166  1.00 78.64           C
ATOM   2472  O   ASP A 317      41.908  12.910  19.406  1.00 80.62           O
ATOM   2473  CB  ASP A 317      44.328  12.424  20.674  1.00 83.34           C
ATOM   2474  CG  ASP A 317      45.800  12.039  20.824  1.00 89.99           C
ATOM   2475  OD1 ASP A 317      46.517  12.001  19.796  1.00 92.40           O
ATOM   2476  OD2 ASP A 317      46.246  11.784  21.964  1.00 92.85           O
ATOM   2477  N   ARG A 318      42.621  14.780  18.348  1.00 77.41           N
ATOM   2478  CA  ARG A 318      41.419  15.058  17.573  1.00 74.69           C
ATOM   2479  C   ARG A 318      41.878  15.849  16.357  1.00 73.27           C
ATOM   2480  O   ARG A 318      41.164  15.940  15.357  1.00 73.07           O
ATOM   2481  CB  ARG A 318      40.436  15.905  18.392  1.00 72.86           C
ATOM   2482  CG  ARG A 318      39.720  15.139  19.496  1.00 73.72           C
ATOM   2483  CD  ARG A 318      38.963  16.058  20.429  1.00 75.04           C
ATOM   2484  NE  ARG A 318      38.091  16.982  19.710  1.00 77.68           N
ATOM   2485  CZ  ARG A 318      36.926  17.428  20.171  1.00 79.28           C
ATOM   2486  NH1 ARG A 318      36.479  17.027  21.355  1.00 77.37           N
ATOM   2487  NH2 ARG A 318      36.226  18.314  19.468  1.00 81.27           N
ATOM   2488  N   PHE A 319      43.099  16.379  16.444  1.00 71.81           N
ATOM   2489  CA  PHE A 319      43.693  17.187  15.380  1.00 71.58           C
ATOM   2490  C   PHE A 319      44.983  16.571  14.830  1.00 71.04           C
ATOM   2491  O   PHE A 319      45.714  15.872  15.538  1.00 70.70           O
ATOM   2492  CB  PHE A 319      43.965  18.605  15.904  1.00 67.34           C
ATOM   2493  CG  PHE A 319      42.827  19.184  16.709  1.00 61.35           C
ATOM   2494  CD1 PHE A 319      41.690  19.687  16.079  1.00 60.62           C
ATOM   2495  CD2 PHE A 319      42.884  19.202  18.099  1.00 60.16           C
ATOM   2496  CE1 PHE A 319      40.626  20.196  16.820  1.00 57.05           C
ATOM   2497  CE2 PHE A 319      41.827  19.709  18.850  1.00 58.76           C
ATOM   2498  CZ  PHE A 319      40.695  20.206  18.208  1.00 58.40           C
TER    2499      PHE A 319
HETATM 2500  PA  NAP   350      31.315  25.650  13.389  1.00 34.76           P
HETATM 2501  O1A NAP   350      31.563  25.016  12.043  1.00 31.65           O
HETATM 2502  O2A NAP   350      32.085  25.166  14.562  1.00 37.84           O
HETATM 2503  O5B NAP   350      29.684  25.558  13.650  1.00 39.24           O
HETATM 2504  C5B NAP   350      28.750  25.313  12.566  1.00 36.88           C
HETATM 2505  C4B NAP   350      27.842  24.205  13.036  1.00 35.36           C
HETATM 2506  O4B NAP   350      26.718  24.160  12.128  1.00 36.40           O
HETATM 2507  C3B NAP   350      28.498  22.848  12.994  1.00 35.93           C
HETATM 2508  O3B NAP   350      28.280  22.123  14.231  1.00 34.09           O
HETATM 2509  C2B NAP   350      27.823  22.165  11.864  1.00 39.63           C
HETATM 2510  O2B NAP   350      27.698  20.766  12.111  1.00 47.76           O
HETATM 2511  C1B NAP   350      26.459  22.787  11.809  1.00 35.60           C
HETATM 2512  N9A NAP   350      25.866  22.654  10.439  1.00 33.14           N
HETATM 2513  C8A NAP   350      26.342  23.165   9.236  1.00 30.10           C
HETATM 2514  N7A NAP   350      25.580  22.847   8.223  1.00 32.59           N
HETATM 2515  C5A NAP   350      24.548  22.085   8.771  1.00 31.41           C
HETATM 2516  C6A NAP   350      23.419  21.453   8.194  1.00 30.25           C
HETATM 2517  N6A NAP   350      23.180  21.507   6.891  1.00 29.06           N
HETATM 2518  N1A NAP   350      22.576  20.769   9.014  1.00 28.70           N
```

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HETATM 2519  C2A NAP   350      22.831  20.718  10.330  1.00 28.43           C
HETATM 2520  N3A NAP   350      23.865  21.280  10.954  1.00 30.51           N
HETATM 2521  C4A NAP   350      24.696  21.965  10.107  1.00 31.90           C
HETATM 2522  O3  NAP   350      31.431  27.248  13.257  1.00 37.22           O
HETATM 2523  PN  NAP   350      31.468  28.504  14.272  1.00 35.69           P
HETATM 2524  O1N NAP   350      32.940  28.921  14.381  1.00 40.67           O
HETATM 2525  O2N NAP   350      30.791  28.014  15.557  1.00 35.97           O
HETATM 2526  O5D NAP   350      30.642  29.696  13.569  1.00 41.76           O
HETATM 2527  C5D NAP   350      29.194  29.797  13.621  1.00 38.01           C
HETATM 2528  C4D NAP   350      28.817  31.252  13.326  1.00 41.09           C
HETATM 2529  O4D NAP   350      29.468  32.058  14.355  1.00 41.66           O
HETATM 2530  C3D NAP   350      29.433  31.777  12.022  1.00 42.10           C
HETATM 2531  O3D NAP   350      28.658  31.471  10.835  1.00 38.55           O
HETATM 2532  C2D NAP   350      29.570  33.266  12.272  1.00 42.29           C
HETATM 2533  O2D NAP   350      28.363  33.916  11.954  1.00 45.57           O
HETATM 2534  C1D NAP   350      29.908  33.315  13.798  1.00 41.41           C
HETATM 2535  N1N NAP   350      31.359  33.479  13.921  1.00 41.86           N
HETATM 2536  C2N NAP   350      31.799  34.743  13.573  1.00 43.61           C
HETATM 2537  C3N NAP   350      33.189  35.007  13.653  1.00 44.66           C
HETATM 2538  C7N NAP   350      33.656  36.335  13.282  1.00 48.04           C
HETATM 2539  O7N NAP   350      32.753  37.260  12.896  1.00 50.66           O
HETATM 2540  N7N NAP   350      34.863  36.682  13.302  1.00 52.50           N
HETATM 2541  C4N NAP   350      34.070  33.999  14.067  1.00 42.95           C
HETATM 2542  C5N NAP   350      33.626  32.752  14.411  1.00 44.60           C
HETATM 2543  C6N NAP   350      32.263  32.485  14.334  1.00 44.58           C
HETATM 2544  P2B NAP   350      28.713  19.674  11.451  1.00 52.24           P
HETATM 2545  O1X NAP   350      30.120  20.272  11.538  1.00 50.46           O
HETATM 2546  O2X NAP   350      28.435  18.481  12.338  1.00 53.78           O
HETATM 2547  O3X NAP   350      28.235  19.553  10.022  1.00 50.69           O
HETATM 2548  O   HOH     3      16.326  46.059   6.381  1.00 16.89           O
HETATM 2549  O   HOH     4      61.533  39.995  15.192  1.00 21.68           O
HETATM 2550  O   HOH     5      36.872  37.741  25.626  1.00 22.16           O
HETATM 2551  O   HOH     6      29.237  45.581   4.261  1.00 22.68           O
HETATM 2552  O   HOH     7      21.608  46.154   9.463  1.00 18.04           O
HETATM 2553  O   HOH     8      11.571  47.882   2.388  1.00 23.36           O
HETATM 2554  O   HOH     9      29.141  46.051   1.373  1.00 22.48           O
HETATM 2555  O   HOH    10      40.653  26.941   4.663  1.00 29.01           O
HETATM 2556  O   HOH    11      39.982  37.473  25.247  1.00 26.28           O
HETATM 2557  O   HOH    12      13.736  45.140   5.926  1.00 15.18           O
HETATM 2558  O   HOH    13       8.855  48.580  12.080  1.00 38.11           O
HETATM 2559  O   HOH    14      55.911  44.474  15.232  1.00 26.77           O
HETATM 2560  O   HOH    15      17.775  32.273  25.692  1.00 35.56           O
HETATM 2561  O   HOH    16      40.798  42.277  21.746  1.00 30.77           O
HETATM 2562  O   HOH    17      33.186  44.489  25.689  1.00 25.27           O
HETATM 2563  O   HOH    18      40.227  42.267  14.187  1.00 25.08           O
HETATM 2564  O   HOH    19      14.481  45.145  12.683  1.00 24.39           O
HETATM 2565  O   HOH    20      21.727  49.624   2.552  1.00 23.58           O
HETATM 2566  O   HOH    21      28.009  47.180  20.039  1.00 31.78           O
HETATM 2567  O   HOH    22      55.235  38.968  30.303  1.00 31.54           O
HETATM 2568  O   HOH    23      20.253  42.828  17.183  1.00 18.81           O
HETATM 2569  O   HOH    24      18.161  41.680  13.459  1.00 22.68           O
HETATM 2570  O   HOH    25      60.844  36.217  20.812  1.00 22.17           O
HETATM 2571  O   HOH    26      61.525  26.415  23.436  1.00 28.05           O
HETATM 2572  O   HOH    27       9.862  49.495  16.055  1.00 29.82           O
HETATM 2573  O   HOH    28       4.997  38.912  16.336  1.00 62.85           O
HETATM 2574  O   HOH    29      25.400  31.296  12.074  1.00 41.46           O
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HETATM 2575  O   HOH    30      24.605  36.292  29.442  1.00 31.75           O
HETATM 2576  O   HOH    31      52.258  40.744  10.813  1.00 28.10           O
HETATM 2577  O   HOH    32      28.510  50.472  18.599  1.00 25.40           O
HETATM 2578  O   HOH    33      24.456  31.179   8.274  1.00 39.37           O
HETATM 2579  O   HOH    34      53.348  32.774   9.272  1.00 34.82           O
HETATM 2580  O   HOH    35       9.013  27.922   0.782  1.00 59.23           O
HETATM 2581  O   HOH    36      49.684  45.671  20.703  1.00 54.40           O
HETATM 2582  O   HOH    37      28.274  26.933  16.157  1.00 26.41           O
HETATM 2583  O   HOH    38      48.615  49.190  12.585  1.00 57.60           O
HETATM 2584  O   HOH    39      27.305  50.883  30.129  1.00 80.77           O
HETATM 2585  O   HOH    40      14.791  37.777  20.135  1.00 24.63           O
HETATM 2586  O   HOH    41      58.836  26.482  29.243  1.00 30.33           O
HETATM 2587  O   HOH    42      29.869  28.999  27.315  1.00 31.54           O
HETATM 2588  O   HOH    43      59.314  29.151  11.354  1.00 48.32           O
HETATM 2589  O   HOH    44      40.913  29.037  19.585  1.00 19.90           O
HETATM 2590  O   HOH    46      27.296  20.878  22.102  1.00 27.78           O
HETATM 2591  O   HOH    47      34.925  42.289   4.172  1.00 31.35           O
HETATM 2592  O   HOH    48      39.562  54.767  10.562  1.00 55.88           O
HETATM 2593  O   HOH    49       6.679  46.246  12.513  1.00 39.35           O
HETATM 2594  O   HOH    50      47.645  26.949  29.660  1.00 37.74           O
HETATM 2595  O   HOH    51      53.077  48.894  15.755  1.00 72.97           O
HETATM 2596  O   HOH    52      57.009  36.229  24.515  1.00 29.76           O
HETATM 2597  O   HOH    53      63.450  27.712  33.414  1.00 55.50           O
HETATM 2598  O   HOH    54      60.411  39.030  18.977  1.00 36.40           O
HETATM 2599  O   HOH    55      14.626  48.458  15.987  1.00 32.90           O
HETATM 2600  O   HOH    56      32.983  53.371  11.919  1.00 35.06           O
HETATM 2601  O   HOH    57      13.156  46.110  15.070  1.00 40.18           O
HETATM 2602  O   HOH    58       1.780  40.262   5.360  1.00 68.99           O
HETATM 2603  O   HOH    59      53.241  19.437  26.942  1.00 55.71           O
HETATM 2604  O   HOH    60      49.782  28.984  30.240  1.00 31.55           O
HETATM 2605  O   HOH    61      33.206  33.012   0.803  1.00 32.86           O
HETATM 2606  O   HOH    62      20.073  49.510   6.142  1.00 50.79           O
HETATM 2607  O   HOH    64      30.893  22.188  24.753  1.00 69.01           O
HETATM 2608  O   HOH    66       9.313  39.417  21.861  1.00 38.81           O
HETATM 2609  O   HOH    67      13.155  16.008  15.399  1.00 64.57           O
HETATM 2610  O   HOH    68      41.811  33.507  15.483  1.00 30.96           O
HETATM 2611  O   HOH    69      55.349  43.715   6.074  1.00 27.98           O
HETATM 2612  O   HOH    70      39.825  31.318  15.523  1.00 37.16           O
HETATM 2613  O   HOH    71      44.794  38.590  11.312  1.00 76.74           O
HETATM 2614  O   HOH    72      63.211  26.438  21.348  1.00 40.93           O
HETATM 2615  O   HOH    73      42.497  49.542   8.832  1.00 61.72           O
HETATM 2616  O   HOH    74      20.997  22.346  14.536  1.00 27.47           O
HETATM 2617  O   HOH    75      63.537  36.837  22.163  1.00 35.85           O
HETATM 2618  O   HOH    76      50.500  20.192  31.793  1.00 57.25           O
HETATM 2619  O   HOH    77      54.819  22.298  24.157  1.00 32.35           O
HETATM 2620  O   HOH    78      25.951  21.139  15.523  1.00 40.44           O
HETATM 2621  O   HOH    79       8.286  32.441  20.329  1.00 44.66           O
HETATM 2622  O   HOH    80      10.336  42.096  25.866  1.00 73.09           O
HETATM 2623  O   HOH    81      33.522  31.263   6.723  1.00 44.11           O
HETATM 2624  O   HOH    82      37.121  42.237  13.398  1.00 49.83           O
HETATM 2625  O   HOH    83      32.615  33.472  10.935  1.00 31.04           O
HETATM 2626  O   HOH    84      30.882  25.099   9.566  1.00 47.19           O
HETATM 2627  O   HOH    85      23.744  20.856  13.717  1.00 47.66           O
HETATM 2628  O   HOH    86      20.375  19.785  12.785  1.00 40.92           O
HETATM 2629  O   HOH    87      20.549  21.496  17.091  1.00 32.28           O
HETATM 2630  O   HOH    88      25.698  17.952  13.720  1.00 57.70           O
```

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CONECT 2500 2501 2502 2503 2522
CONECT 2501 2500
CONECT 2502 2500
CONECT 2503 2500 2504
CONECT 2504 2503 2505
CONECT 2505 2504 2506 2507
CONECT 2506 2505 2511
CONECT 2507 2505 2508 2509
CONECT 2508 2507
CONECT 2509 2507 2510 2511
CONECT 2510 2509 2544
CONECT 2511 2506 2509 2512
CONECT 2512 2511 2513 2521
CONECT 2513 2512 2514
CONECT 2514 2513 2515
CONECT 2515 2514 2516 2521
CONECT 2516 2515 2517 2518
CONECT 2517 2516
CONECT 2518 2516 2519
CONECT 2519 2518 2520
CONECT 2520 2519 2521
CONECT 2521 2512 2515 2520
CONECT 2522 2500 2523
CONECT 2523 2522 2524 2525 2526
CONECT 2524 2523
CONECT 2525 2523
CONECT 2526 2523 2527
CONECT 2527 2526 2528
CONECT 2528 2527 2529 2530
CONECT 2529 2528 2534
CONECT 2530 2528 2531 2532
CONECT 2531 2530
CONECT 2532 2530 2533 2534
CONECT 2533 2532
CONECT 2534 2529 2532 2535
CONECT 2535 2534 2536 2543
CONECT 2536 2535 2537
CONECT 2537 2536 2538 2541
CONECT 2538 2537 2539 2540
CONECT 2539 2538
CONECT 2540 2538
CONECT 2541 2537 2542
CONECT 2542 2541 2543
CONECT 2543 2535 2542
CONECT 2544 2510 2545 2546 2547
CONECT 2545 2544
CONECT 2546 2544
CONECT 2547 2544
MASTER      273    0    1   13   10    0    0    6 2629    1   48   25
END
```

```
HEADER    OXIDOREDUCTASE                          31-AUG-98   1BSV
TITLE     GDP-FUCOSE SYNTHETASE FROM ESCHERICHIA COLI COMPLEX WITH
TITLE    2 NADPH
COMPND    MOL_ID: 1;
COMPND   2 MOLECULE: PROTEIN (GDP-FUCOSE SYNTHETASE);
COMPND   3 CHAIN: A;
COMPND   4 SYNONYM: WCAG, GDP-4-KETO 6-DEOXY-MANNOSE 3,5-EPIMERASE 4-
COMPND   5 REDUCTASE;
COMPND   6 ENGINEERED: YES
SOURCE    MOL_ID: 1;
SOURCE   2 ORGANISM_SCIENTIFIC: ESCHERICHIA COLI;
SOURCE   3 ORGANISM_COMMON: BACTERIA;
SOURCE   4 STRAIN: K12;
SOURCE   5 CELLULAR_LOCATION: CYTOPLASM;
SOURCE   6 GENE: WCAG;
SOURCE   7 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE   8 EXPRESSION_SYSTEM_COMMON: BACTERIA;
SOURCE   9 EXPRESSION_SYSTEM_STRAIN: BL-21;
SOURCE  10 EXPRESSION_SYSTEM_CELLULAR_LOCATION: CYTOPLASM;
SOURCE  11 EXPRESSION_SYSTEM_PLASMID: PSEWCAG;
SOURCE  12 EXPRESSION_SYSTEM_GENE: WCAG
KEYWDS    EPIMERASE-REDUCTASE, NADPH, GDP-FUCOSE
EXPDTA    X-RAY DIFFRACTION
AUTHOR    W.S.SOMERS,M.L.STAHL,F.X.SULLIVAN
REVDAT   2   27-DEC-00 1BSV    1       COMPND SOURCE REMARK
REVDAT   1   26-AUG-99 1BSV    0
JRNL        AUTH   W.S.SOMERS,M.L.STAHL,F.X.SULLIVAN
JRNL        TITL   GDP-FUCOSE SYNTHETASE FROM ESCHERICHIA COLI:
JRNL        TITL 2 STRUCTURE OF A UNIQUE MEMBER OF THE SHORT-CHAIN
JRNL        TITL 3 DEHYDROGENASE/REDUCTASE FAMILY THAT CATALYZES TWO
JRNL        TITL 4 DISTINCT REACTIONS AT THE SAME ACTIVE SITE.
JRNL        REF    STRUCTURE                     V.   6  1601 1998
JRNL        REFN   ASTM STRUE6  UK ISSN 0969-2126
REMARK   1
REMARK   2
REMARK   2 RESOLUTION. 2.20 ANGSTROMS.
REMARK   3
REMARK   3 REFINEMENT.
REMARK   3   PROGRAM     : X-PLOR 3.843
REMARK   3   AUTHORS     : BRUNGER
REMARK   3
REMARK   3  DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) : 2.20
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) : 14.00
REMARK   3   DATA CUTOFF            (SIGMA(F)) : 2.000
REMARK   3   DATA CUTOFF HIGH         (ABS(F)) : NULL
REMARK   3   DATA CUTOFF LOW          (ABS(F)) : NULL
REMARK   3   COMPLETENESS (WORKING+TEST)   (%) : 98.4
REMARK   3   NUMBER OF REFLECTIONS             : 23752
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD          : NULL
REMARK   3   FREE R VALUE TEST SET SELECTION  : NULL
REMARK   3   R VALUE            (WORKING SET) : 0.170
```

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REMARK   3   FREE R VALUE                     : NULL
REMARK   3   FREE R VALUE TEST SET SIZE   (%) : NULL
REMARK   3   FREE R VALUE TEST SET COUNT      : NULL
REMARK   3   ESTIMATED ERROR OF FREE R VALUE  : NULL
REMARK   3
REMARK   3  FIT IN THE HIGHEST RESOLUTION BIN.
REMARK   3   TOTAL NUMBER OF BINS USED           : NULL
REMARK   3   BIN RESOLUTION RANGE HIGH       (A) : NULL
REMARK   3   BIN RESOLUTION RANGE LOW        (A) : NULL
REMARK   3   BIN COMPLETENESS (WORKING+TEST) (%) : NULL
REMARK   3   REFLECTIONS IN BIN    (WORKING SET) : NULL
REMARK   3   BIN R VALUE           (WORKING SET) : NULL
REMARK   3   BIN FREE R VALUE                    : NULL
REMARK   3   BIN FREE R VALUE TEST SET SIZE  (%) : NULL
REMARK   3   BIN FREE R VALUE TEST SET COUNT     : NULL
REMARK   3   ESTIMATED ERROR OF BIN FREE R VALUE : NULL
REMARK   3
REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3   PROTEIN ATOMS            : 2498
REMARK   3   NUCLEIC ACID ATOMS       : 0
REMARK   3   HETEROGEN ATOMS          : 48
REMARK   3   SOLVENT ATOMS            : 84
REMARK   3
REMARK   3  B VALUES.
REMARK   3   FROM WILSON PLOT           (A**2) : NULL
REMARK   3   MEAN B VALUE      (OVERALL, A**2) : NULL
REMARK   3   OVERALL ANISOTROPIC B VALUE.
REMARK   3    B11 (A**2) : NULL
REMARK   3    B22 (A**2) : NULL
REMARK   3    B33 (A**2) : NULL
REMARK   3    B12 (A**2) : NULL
REMARK   3    B13 (A**2) : NULL
REMARK   3    B23 (A**2) : NULL
REMARK   3
REMARK   3  ESTIMATED COORDINATE ERROR.
REMARK   3   ESD FROM LUZZATI PLOT        (A) : NULL
REMARK   3   ESD FROM SIGMAA              (A) : NULL
REMARK   3   LOW RESOLUTION CUTOFF        (A) : NULL
REMARK   3
REMARK   3  CROSS-VALIDATED ESTIMATED COORDINATE ERROR.
REMARK   3   ESD FROM C-V LUZZATI PLOT    (A) : NULL
REMARK   3   ESD FROM C-V SIGMAA          (A) : NULL
REMARK   3
REMARK   3  RMS DEVIATIONS FROM IDEAL VALUES.
REMARK   3   BOND LENGTHS                 (A) : 0.009
REMARK   3   BOND ANGLES            (DEGREES) : 1.38
REMARK   3   DIHEDRAL ANGLES        (DEGREES) : NULL
REMARK   3   IMPROPER ANGLES        (DEGREES) : NULL
REMARK   3
REMARK   3  ISOTROPIC THERMAL MODEL : NULL
REMARK   3
REMARK   3  ISOTROPIC THERMAL FACTOR RESTRAINTS.    RMS    SIGMA
REMARK   3   MAIN-CHAIN BOND              (A**2) : NULL  ; NULL
REMARK   3   MAIN-CHAIN ANGLE             (A**2) : NULL  ; NULL
REMARK   3   SIDE-CHAIN BOND              (A**2) : NULL  ; NULL
REMARK   3   SIDE-CHAIN ANGLE             (A**2) : NULL  ; NULL
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REMARK   3
REMARK   3  NCS MODEL : NULL
REMARK   3
REMARK   3  NCS RESTRAINTS.                         RMS   SIGMA/WEIGHT
REMARK   3   GROUP  1  POSITIONAL            (A) : NULL  ; NULL
REMARK   3   GROUP  1  B-FACTOR           (A**2) : NULL  ; NULL
REMARK   3
REMARK   3  PARAMETER FILE  1  : PARHCSDX.PRO
REMARK   3  PARAMETER FILE  2  : NULL
REMARK   3  TOPOLOGY FILE  1   : TOPHCSDX.PRO
REMARK   3  TOPOLOGY FILE  2   : NULL
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS: NULL
REMARK   4
REMARK   4 1BSV COMPLIES WITH FORMAT V. 3.0, 1-DEC-2006
REMARK   4
REMARK   4 THIS IS THE REMEDIATED VERSION OF THIS PDB ENTRY.
REMARK   4 REMEDIATED DATA FILE REVISION 3.100 (2007-03-16)
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB .
REMARK 100 THE RCSB ID CODE IS RCSB007104.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200  EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200  DATE OF DATA COLLECTION        : 15-JUL-1997
REMARK 200  TEMPERATURE           (KELVIN) : 291.0
REMARK 200  PH                             : 7.00
REMARK 200  NUMBER OF CRYSTALS USED        : 1
REMARK 200
REMARK 200  SYNCHROTRON              (Y/N) : N
REMARK 200  RADIATION SOURCE               : ROTATING ANODE
REMARK 200  BEAMLINE                       : NULL
REMARK 200  X-RAY GENERATOR MODEL          : RIGAKU RU200
REMARK 200  MONOCHROMATIC OR LAUE    (M/L) : M
REMARK 200  WAVELENGTH OR RANGE        (A) : 1.5418
REMARK 200  MONOCHROMATOR                  : NI FILTER
REMARK 200  OPTICS                         : MIRRORS
REMARK 200
REMARK 200  DETECTOR TYPE                  : IMAGE PLATE
REMARK 200  DETECTOR MANUFACTURER          : RIGAKU RAXIS II
REMARK 200  INTENSITY-INTEGRATION SOFTWARE : DENZO
REMARK 200  DATA SCALING SOFTWARE          : SCALEPACK
REMARK 200
REMARK 200  NUMBER OF UNIQUE REFLECTIONS   : 24049
REMARK 200  RESOLUTION RANGE HIGH      (A) : 2.200
REMARK 200  RESOLUTION RANGE LOW       (A) : 14.000
REMARK 200  REJECTION CRITERIA  (SIGMA(I)) : 0.000
REMARK 200
REMARK 200 OVERALL.
REMARK 200  COMPLETENESS FOR RANGE     (%) : 99.6
REMARK 200  DATA REDUNDANCY                : 6.900
REMARK 200  R MERGE                    (I) : 0.05600
REMARK 200  R SYM                      (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR THE DATA SET  : 26.4000
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
```

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REMARK 200  HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.20
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : 2.28
REMARK 200  COMPLETENESS FOR SHELL     (%) : 96.7
REMARK 200  DATA REDUNDANCY IN SHELL       : NULL
REMARK 200  R MERGE FOR SHELL          (I) : NULL
REMARK 200  R SYM FOR SHELL            (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR SHELL         : 4.400
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: MOLECULAR REPLACEMENT
REMARK 200 SOFTWARE USED: NULL
REMARK 200 STARTING MODEL: 1GFS
REMARK 200
REMARK 200 REMARK: NULL
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS   (%): 62.14
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 3.25
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: 4.0 M SODIUM FORMATE, PH 7
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 32 2 1
REMARK 290
REMARK 290      SYMOP   SYMMETRY
REMARK 290     NNNMMM   OPERATOR
REMARK 290       1555   X,Y,Z
REMARK 290       2555   -Y,X-Y,2/3+Z
REMARK 290       3555   -X+Y,-X,1/3+Z
REMARK 290       4555   Y,X,-Z
REMARK 290       5555   X-Y,-Y,1/3-Z
REMARK 290       6555   -X,-X+Y,2/3-Z
REMARK 290
REMARK 290     WHERE NNN -> OPERATOR NUMBER
REMARK 290           MMM -> TRANSLATION VECTOR
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY
REMARK 290 RELATED MOLECULES.
REMARK 290   SMTRY1   1  1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY2   1  0.000000  1.000000  0.000000        0.00000
REMARK 290   SMTRY3   1  0.000000  0.000000  1.000000        0.00000
REMARK 290   SMTRY1   2 -0.500000 -0.866025  0.000000        0.00000
REMARK 290   SMTRY2   2  0.866025 -0.500000  0.000000        0.00000
REMARK 290   SMTRY3   2  0.000000  0.000000  1.000000       49.93333
REMARK 290   SMTRY1   3 -0.500000  0.866025  0.000000        0.00000
REMARK 290   SMTRY2   3 -0.866025 -0.500000  0.000000        0.00000
REMARK 290   SMTRY3   3  0.000000  0.000000  1.000000       24.96667
REMARK 290   SMTRY1   4 -0.500000  0.866025  0.000000        0.00000
REMARK 290   SMTRY2   4  0.866025  0.500000  0.000000        0.00000
REMARK 290   SMTRY3   4  0.000000  0.000000 -1.000000        0.00000
REMARK 290   SMTRY1   5  1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY2   5  0.000000 -1.000000  0.000000        0.00000
REMARK 290   SMTRY3   5  0.000000  0.000000 -1.000000       24.96667
REMARK 290   SMTRY1   6 -0.500000 -0.866025  0.000000        0.00000
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REMARK 290   SMTRY2   6 -0.866025  0.500000  0.000000        0.00000
REMARK 290   SMTRY3   6  0.000000  0.000000 -1.000000       49.93333
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF 1 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW.  BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE: 1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A
REMARK 350   BIOMT1   1  1.000000  0.000000  0.000000        0.00000
REMARK 350   BIOMT2   1  0.000000  1.000000  0.000000        0.00000
REMARK 350   BIOMT3   1  0.000000  0.000000  1.000000        0.00000
REMARK 350   BIOMT1   2 -0.500000  0.866025  0.000000        0.00000
REMARK 350   BIOMT2   2  0.866025  0.500000  0.000000        0.00000
REMARK 350   BIOMT3   2  0.000000  0.000000 -1.000000        0.00000
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465   M RES C SSSEQI
REMARK 465     MET A     1
REMARK 465     SER A     2
REMARK 465     ARG A   320
REMARK 465     GLY A   321
REMARK 470
REMARK 470 MISSING ATOM
REMARK 470 THE FOLLOWING RESIDUES HAVE MISSING ATOMS(M=MODEL NUMBER;
REMARK 470 RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE NUMBER;
REMARK 470 I=INSERTION CODE):
REMARK 470   M RES CSSEQI  ATOMS
REMARK 470     ARG A  45    CG    CD    NE    CZ    NH1   NH2
REMARK 470     ARG A  55    CG    CD    NE    CZ    NH1   NH2
REMARK 470     HIS A 174    CG    ND1   CD2   CE1   NE2
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,2(A3,1X,A1,I4,A1,1X,A4,3X),F6.3)
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REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   RES CSSEQI ATM2   DEVIATION
REMARK 500    ILE A 110   CB    ILE A 110   CG2   -0.051
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   ATM2   ATM3
REMARK 500    TYR A  60   N   -  CA  -  C   ANGL. DEV. = -8.3 DEGREES
REMARK 500    LYS A  65   N   -  CA  -  C   ANGL. DEV. =-11.5 DEGREES
REMARK 500    ASP A  98   N   -  CA  -  C   ANGL. DEV. = 10.7 DEGREES
REMARK 500    VAL A  99   N   -  CA  -  C   ANGL. DEV. = -9.4 DEGREES
REMARK 500    GLU A 134   N   -  CA  -  C   ANGL. DEV. =  8.5 DEGREES
REMARK 500    GLU A 226   N   -  CA  -  C   ANGL. DEV. =  8.6 DEGREES
REMARK 500    LEU A 240   N   -  CA  -  C   ANGL. DEV. = -9.2 DEGREES
REMARK 500    SER A 241   N   -  CA  -  C   ANGL. DEV. =  9.4 DEGREES
REMARK 500    ASP A 286   N   -  CA  -  C   ANGL. DEV. =-11.7 DEGREES
REMARK 525
REMARK 525 SOLVENT
REMARK 525 THE FOLLOWING SOLVENT MOLECULES LIE FARTHER THAN EXPECTED
REMARK 525 FROM THE PROTEIN OR NUCLEIC ACID MOLECULE AND MAY BE
REMARK 525 ASSOCIATED WITH A SYMMETRY RELATED MOLECULE (M=MODEL
REMARK 525 NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE
REMARK 525 NUMBER; I=INSERTION CODE):
REMARK 525
REMARK 525  M RES CSSEQI
REMARK 525    HOH   420        DISTANCE =  5.47 ANGSTROMS
REMARK 525    HOH   427        DISTANCE =  6.09 ANGSTROMS
REMARK 525    HOH   459        DISTANCE =  5.18 ANGSTROMS
DBREF  1BSV A    1   321  UNP    P32055   FCL_ECOLI        1    321
SEQRES   1 A  321  MET SER LYS GLN ARG VAL PHE ILE ALA GLY HIS ARG GLY
SEQRES   2 A  321  MET VAL GLY SER ALA ILE ARG ARG GLN LEU GLU GLN ARG
SEQRES   3 A  321  GLY ASP VAL GLU LEU VAL LEU ARG THR ARG ASP GLU LEU
SEQRES   4 A  321  ASN LEU LEU ASP SER ARG ALA VAL HIS ASP PHE PHE ALA
SEQRES   5 A  321  SER GLU ARG ILE ASP GLN VAL TYR LEU ALA ALA ALA LYS
SEQRES   6 A  321  VAL GLY GLY ILE VAL ALA ASN ASN THR TYR PRO ALA ASP
SEQRES   7 A  321  PHE ILE TYR GLN ASN MET MET ILE GLU SER ASN ILE ILE
SEQRES   8 A  321  HIS ALA ALA HIS GLN ASN ASP VAL ASN LYS LEU LEU PHE
SEQRES   9 A  321  LEU GLY SER SER CYS ILE TYR PRO LYS LEU ALA LYS GLN
SEQRES  10 A  321  PRO MET ALA GLU SER GLU LEU LEU GLN GLY THR LEU GLU
SEQRES  11 A  321  PRO THR ASN GLU PRO TYR ALA ILE ALA LYS ILE ALA GLY
SEQRES  12 A  321  ILE LYS LEU CYS GLU SER TYR ASN ARG GLN TYR GLY ARG
SEQRES  13 A  321  ASP TYR ARG SER VAL MET PRO THR ASN LEU TYR GLY PRO
SEQRES  14 A  321  HIS ASP ASN PHE HIS PRO SER ASN SER HIS VAL ILE PRO
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SEQRES  15 A  321  ALA LEU LEU ARG ARG PHE HIS GLU ALA THR ALA GLN ASN
SEQRES  16 A  321  ALA PRO ASP VAL VAL VAL TRP GLY SER GLY THR PRO MET
SEQRES  17 A  321  ARG GLU PHE LEU HIS VAL ASP ASP MET ALA ALA ALA SER
SEQRES  18 A  321  ILE HIS VAL MET GLU LEU ALA HIS GLU VAL TRP LEU GLU
SEQRES  19 A  321  ASN THR GLN PRO MET LEU SER HIS ILE ASN VAL GLY THR
SEQRES  20 A  321  GLY VAL ASP CYS THR ILE ARG GLU LEU ALA GLN THR ILE
SEQRES  21 A  321  ALA LYS VAL VAL GLY TYR LYS GLY ARG VAL VAL PHE ASP
SEQRES  22 A  321  ALA SER LYS PRO ASP GLY THR PRO ARG LYS LEU LEU ASP
SEQRES  23 A  321  VAL THR ARG LEU HIS GLN LEU GLY TRP TYR HIS GLU ILE
SEQRES  24 A  321  SER LEU GLU ALA GLY LEU ALA SER THR TYR GLN TRP PHE
SEQRES  25 A  321  LEU GLU ASN GLN ASP ARG PHE ARG GLY
HET    NDP    350      48
HETNAM     NDP NADPH DIHYDRO-NICOTINAMIDE-ADENINE-DINUCLEOTIDE
HETNAM   2 NDP  PHOSPHATE
FORMUL   2  NDP    C21 H30 N7 O17 P3
FORMUL   3  HOH   *84(H2 O)
HELIX    1   1 MET A   14  GLU A   24  1                                  11
HELIX    2   2 SER A   44  SER A   53  1                                  10
HELIX    3   3 ILE A   69  THR A   74  1                                   6
HELIX    4   4 PRO A   76  ASN A   97  1                                  22
HELIX    5   5 SER A  108  ILE A  110  5                                   3
HELIX    6   6 GLU A  121  GLU A  123  5                                   3
HELIX    7   7 PRO A  131  TYR A  154  5                                  24
HELIX    8   8 VAL A  180  ALA A  193  1                                  14
HELIX    9   9 VAL A  214  GLU A  226  1                                  13
HELIX   10  10 HIS A  229  ASN A  235  1                                   7
HELIX   11  11 ILE A  253  VAL A  264  1                                  12
HELIX   12  12 THR A  288  GLN A  292  1                                   5
HELIX   13  13 LEU A  301  GLU A  314  1                                  14
SHEET    1   A 6 VAL A  29  VAL A  32  0
SHEET    2   A 6 GLN A   4  ALA A   9  1  N  GLN A   4   O  GLU A  30
SHEET    3   A 6 GLN A  58  LEU A  61  1  N  GLN A  58   O  PHE A   7
SHEET    4   A 6 LYS A 101  LEU A 105  1  N  LYS A 101   O  VAL A  59
SHEET    5   A 6 ASP A 157  PRO A 163  1  N  ASP A 157   O  LEU A 102
SHEET    6   A 6 ILE A 243  VAL A 245  1  N  ILE A 243   O  MET A 162
SHEET    1   B 2 ASN A 165  TYR A 167  0
SHEET    2   B 2 PHE A 211  HIS A 213  1  N  LEU A 212   O  ASN A 165
SHEET    1   C 2 ASP A 198  TRP A 202  0
SHEET    2   C 2 ARG A 269  ASP A 273  1  N  ARG A 269   O  VAL A 199
CISPEP   1 GLN A  117    PRO A  118          0        -0.17
CRYST1  104.300  104.300   74.900  90.00  90.00 120.00 P 32 2 1      6
ORIGX1      1.000000  0.000000  0.000000        0.00000
ORIGX2      0.000000  1.000000  0.000000        0.00000
ORIGX3      0.000000  0.000000  1.000000        0.00000
SCALE1      0.009588  0.005535  0.000000        0.00000
SCALE2      0.000000  0.011071  0.000000        0.00000
SCALE3      0.000000  0.000000  0.013351        0.00000
ATOM      1  N   LYS A   3       8.814  27.418  31.593  1.00 62.99           N
ATOM      2  CA  LYS A   3      10.166  26.993  31.124  1.00 64.49           C
ATOM      3  C   LYS A   3      10.337  27.108  29.598  1.00 63.28           C
ATOM      4  O   LYS A   3       9.731  26.358  28.819  1.00 64.40           O
ATOM      5  CB  LYS A   3      10.471  25.562  31.576  1.00 64.00           C
ATOM      6  CG  LYS A   3      11.806  25.050  31.073  1.00 66.50           C
ATOM      7  CD  LYS A   3      12.036  23.598  31.422  1.00 69.96           C
ATOM      8  CE  LYS A   3      12.218  23.408  32.913  1.00 72.33           C
ATOM      9  NZ  LYS A   3      12.644  22.017  33.224  1.00 73.75           N
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ATOM     10  N   GLN A   4      11.215  28.026  29.203  1.00 58.48           N
ATOM     11  CA  GLN A   4      11.548  28.326  27.813  1.00 51.85           C
ATOM     12  C   GLN A   4      12.184  27.171  27.042  1.00 48.03           C
ATOM     13  O   GLN A   4      13.185  26.610  27.480  1.00 49.95           O
ATOM     14  CB  GLN A   4      12.534  29.492  27.807  1.00 53.77           C
ATOM     15  CG  GLN A   4      12.087  30.690  27.015  1.00 62.44           C
ATOM     16  CD  GLN A   4      10.741  31.197  27.453  1.00 62.62           C
ATOM     17  OE1 GLN A   4       9.908  31.561  26.629  1.00 63.42           O
ATOM     18  NE2 GLN A   4      10.512  31.213  28.758  1.00 66.55           N
ATOM     19  N   ARG A   5      11.611  26.815  25.897  1.00 41.37           N
ATOM     20  CA  ARG A   5      12.190  25.763  25.065  1.00 41.20           C
ATOM     21  C   ARG A   5      13.063  26.415  23.978  1.00 41.40           C
ATOM     22  O   ARG A   5      12.558  27.075  23.061  1.00 38.26           O
ATOM     23  CB  ARG A   5      11.103  24.882  24.459  1.00 42.29           C
ATOM     24  CG  ARG A   5      10.594  23.833  25.427  1.00 44.79           C
ATOM     25  CD  ARG A   5       9.360  23.117  24.902  1.00 50.21           C
ATOM     26  NE  ARG A   5       9.572  22.382  23.650  1.00 51.40           N
ATOM     27  CZ  ARG A   5      10.239  21.234  23.541  1.00 51.72           C
ATOM     28  NH1 ARG A   5      10.789  20.669  24.609  1.00 51.20           N
ATOM     29  NH2 ARG A   5      10.305  20.618  22.368  1.00 48.25           N
ATOM     30  N   VAL A   6      14.377  26.242  24.112  1.00 38.40           N
ATOM     31  CA  VAL A   6      15.355  26.829  23.200  1.00 33.75           C
ATOM     32  C   VAL A   6      16.028  25.873  22.211  1.00 35.52           C
ATOM     33  O   VAL A   6      16.567  24.832  22.595  1.00 37.14           O
ATOM     34  CB  VAL A   6      16.451  27.536  24.006  1.00 30.08           C
ATOM     35  CG1 VAL A   6      17.447  28.220  23.092  1.00 27.75           C
ATOM     36  CG2 VAL A   6      15.822  28.522  24.951  1.00 30.98           C
ATOM     37  N   PHE A   7      15.983  26.245  20.932  1.00 34.47           N
ATOM     38  CA  PHE A   7      16.625  25.483  19.863  1.00 29.57           C
ATOM     39  C   PHE A   7      17.907  26.215  19.501  1.00 30.16           C
ATOM     40  O   PHE A   7      17.882  27.402  19.172  1.00 31.57           O
ATOM     41  CB  PHE A   7      15.743  25.420  18.613  1.00 27.56           C
ATOM     42  CG  PHE A   7      16.427  24.819  17.403  1.00 27.44           C
ATOM     43  CD1 PHE A   7      17.130  23.618  17.499  1.00 27.34           C
ATOM     44  CD2 PHE A   7      16.326  25.432  16.150  1.00 26.01           C
ATOM     45  CE1 PHE A   7      17.720  23.031  16.364  1.00 23.75           C
ATOM     46  CE2 PHE A   7      16.911  24.854  15.012  1.00 26.58           C
ATOM     47  CZ  PHE A   7      17.606  23.651  15.119  1.00 25.98           C
ATOM     48  N   ILE A   8      19.031  25.522  19.624  1.00 29.12           N
ATOM     49  CA  ILE A   8      20.314  26.085  19.255  1.00 26.49           C
ATOM     50  C   ILE A   8      20.713  25.314  18.011  1.00 24.35           C
ATOM     51  O   ILE A   8      20.977  24.116  18.083  1.00 27.37           O
ATOM     52  CB  ILE A   8      21.383  25.868  20.344  1.00 28.91           C
ATOM     53  CG1 ILE A   8      20.940  26.496  21.667  1.00 27.52           C
ATOM     54  CG2 ILE A   8      22.713  26.490  19.899  1.00 31.48           C
ATOM     55  CD1 ILE A   8      21.852  26.162  22.830  1.00 25.68           C
ATOM     56  N   ALA A   9      20.651  25.974  16.860  1.00 25.39           N
ATOM     57  CA  ALA A   9      21.021  25.340  15.597  1.00 25.85           C
ATOM     58  C   ALA A   9      22.545  25.299  15.566  1.00 26.61           C
ATOM     59  O   ALA A   9      23.191  26.272  15.947  1.00 30.10           O
ATOM     60  CB  ALA A   9      20.488  26.148  14.428  1.00 23.29           C
ATOM     61  N   GLY A  10      23.114  24.170  15.149  1.00 25.76           N
ATOM     62  CA  GLY A  10      24.559  24.034  15.105  1.00 22.84           C
ATOM     63  C   GLY A  10      25.174  24.039  16.491  1.00 26.20           C
ATOM     64  O   GLY A  10      26.200  24.675  16.710  1.00 27.87           O
ATOM     65  N   HIS A  11      24.567  23.300  17.416  1.00 24.58           N
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ATOM     66  CA  HIS A  11      25.034  23.227  18.809  1.00 28.86           C
ATOM     67  C   HIS A  11      26.407  22.557  19.001  1.00 29.65           C
ATOM     68  O   HIS A  11      26.985  22.646  20.082  1.00 30.53           O
ATOM     69  CB  HIS A  11      23.982  22.526  19.692  1.00 27.63           C
ATOM     70  CG  HIS A  11      23.752  21.090  19.324  1.00 30.54           C
ATOM     71  ND1 HIS A  11      24.250  20.042  20.068  1.00 34.18           N
ATOM     72  CD2 HIS A  11      23.170  20.534  18.236  1.00 27.15           C
ATOM     73  CE1 HIS A  11      23.997  18.903  19.447  1.00 31.05           C
ATOM     74  NE2 HIS A  11      23.344  19.175  18.333  1.00 33.79           N
ATOM     75  N   ARG A  12      26.898  21.866  17.970  1.00 31.33           N
ATOM     76  CA  ARG A  12      28.192  21.186  18.017  1.00 33.17           C
ATOM     77  C   ARG A  12      29.346  22.089  17.598  1.00 32.79           C
ATOM     78  O   ARG A  12      30.504  21.770  17.848  1.00 34.69           O
ATOM     79  CB  ARG A  12      28.183  19.960  17.104  1.00 40.96           C
ATOM     80  CG  ARG A  12      27.341  18.821  17.603  1.00 54.63           C
ATOM     81  CD  ARG A  12      27.978  18.236  18.847  1.00 71.23           C
ATOM     82  NE  ARG A  12      27.024  17.489  19.662  1.00 84.20           N
ATOM     83  CZ  ARG A  12      26.537  16.291  19.348  1.00 90.48           C
ATOM     84  NH1 ARG A  12      26.917  15.682  18.225  1.00 90.63           N
ATOM     85  NH2 ARG A  12      25.666  15.701  20.164  1.00 90.23           N
ATOM     86  N   GLY A  13      29.031  23.189  16.922  1.00 30.40           N
ATOM     87  CA  GLY A  13      30.059  24.107  16.475  1.00 25.39           C
ATOM     88  C   GLY A  13      30.695  24.875  17.612  1.00 26.60           C
ATOM     89  O   GLY A  13      30.259  24.767  18.754  1.00 27.40           O
ATOM     90  N   MET A  14      31.715  25.667  17.291  1.00 25.20           N
ATOM     91  CA  MET A  14      32.429  26.464  18.275  1.00 27.06           C
ATOM     92  C   MET A  14      31.521  27.414  19.042  1.00 27.75           C
ATOM     93  O   MET A  14      31.489  27.390  20.278  1.00 29.79           O
ATOM     94  CB  MET A  14      33.570  27.250  17.617  1.00 26.09           C
ATOM     95  CG  MET A  14      34.351  28.106  18.607  1.00 31.81           C
ATOM     96  SD  MET A  14      35.825  28.895  17.942  1.00 36.87           S
ATOM     97  CE  MET A  14      35.110  30.010  16.777  1.00 38.38           C
ATOM     98  N   VAL A  15      30.791  28.249  18.305  1.00 30.68           N
ATOM     99  CA  VAL A  15      29.878  29.228  18.900  1.00 30.45           C
ATOM    100  C   VAL A  15      28.618  28.545  19.454  1.00 29.29           C
ATOM    101  O   VAL A  15      28.167  28.857  20.562  1.00 27.30           O
ATOM    102  CB  VAL A  15      29.483  30.343  17.873  1.00 28.63           C
ATOM    103  CG1 VAL A  15      28.662  31.418  18.548  1.00 31.29           C
ATOM    104  CG2 VAL A  15      30.728  30.975  17.282  1.00 29.91           C
ATOM    105  N   GLY A  16      28.068  27.610  18.681  1.00 25.10           N
ATOM    106  CA  GLY A  16      26.883  26.898  19.110  1.00 27.18           C
ATOM    107  C   GLY A  16      27.079  26.194  20.439  1.00 29.83           C
ATOM    108  O   GLY A  16      26.257  26.343  21.347  1.00 27.54           O
ATOM    109  N   SER A  17      28.180  25.452  20.565  1.00 29.97           N
ATOM    110  CA  SER A  17      28.495  24.713  21.787  1.00 27.89           C
ATOM    111  C   SER A  17      28.730  25.614  22.998  1.00 27.51           C
ATOM    112  O   SER A  17      28.393  25.246  24.117  1.00 27.85           O
ATOM    113  CB  SER A  17      29.699  23.794  21.562  1.00 27.72           C
ATOM    114  OG  SER A  17      30.899  24.530  21.447  1.00 32.49           O
ATOM    115  N   ALA A  18      29.303  26.793  22.772  1.00 26.72           N
ATOM    116  CA  ALA A  18      29.558  27.731  23.856  1.00 23.25           C
ATOM    117  C   ALA A  18      28.255  28.270  24.414  1.00 27.51           C
ATOM    118  O   ALA A  18      28.141  28.509  25.613  1.00 32.73           O
ATOM    119  CB  ALA A  18      30.432  28.876  23.375  1.00 23.92           C
ATOM    120  N   ILE A  19      27.289  28.515  23.537  1.00 27.22           N
ATOM    121  CA  ILE A  19      25.989  29.008  23.964  1.00 27.26           C
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ATOM    122  C   ILE A  19      25.309  27.885  24.746  1.00 30.95           C
ATOM    123  O   ILE A  19      24.722  28.121  25.802  1.00 31.85           O
ATOM    124  CB  ILE A  19      25.124  29.426  22.758  1.00 24.40           C
ATOM    125  CG1 ILE A  19      25.687  30.717  22.152  1.00 26.80           C
ATOM    126  CG2 ILE A  19      23.658  29.618  23.175  1.00 22.10           C
ATOM    127  CD1 ILE A  19      25.031  31.129  20.834  1.00 27.70           C
ATOM    128  N   ARG A  20      25.453  26.660  24.245  1.00 33.43           N
ATOM    129  CA  ARG A  20      24.877  25.480  24.868  1.00 34.66           C
ATOM    130  C   ARG A  20      25.439  25.257  26.272  1.00 36.46           C
ATOM    131  O   ARG A  20      24.684  25.028  27.210  1.00 37.71           O
ATOM    132  CB  ARG A  20      25.112  24.254  23.987  1.00 35.12           C
ATOM    133  CG  ARG A  20      24.389  23.022  24.466  1.00 42.11           C
ATOM    134  CD  ARG A  20      25.326  22.086  25.192  1.00 49.73           C
ATOM    135  NE  ARG A  20      25.823  21.037  24.304  1.00 58.77           N
ATOM    136  CZ  ARG A  20      25.282  19.820  24.204  1.00 63.42           C
ATOM    137  NH1 ARG A  20      24.227  19.493  24.946  1.00 61.95           N
ATOM    138  NH2 ARG A  20      25.773  18.933  23.339  1.00 62.99           N
ATOM    139  N   ARG A  21      26.755  25.370  26.421  1.00 36.56           N
ATOM    140  CA  ARG A  21      27.402  25.186  27.716  1.00 34.60           C
ATOM    141  C   ARG A  21      26.833  26.104  28.780  1.00 35.46           C
ATOM    142  O   ARG A  21      26.672  25.698  29.927  1.00 38.07           O
ATOM    143  CB  ARG A  21      28.906  25.431  27.611  1.00 30.90           C
ATOM    144  CG  ARG A  21      29.710  24.190  27.306  1.00 30.19           C
ATOM    145  CD  ARG A  21      31.175  24.533  27.156  1.00 28.95           C
ATOM    146  NE  ARG A  21      31.566  24.636  25.754  1.00 36.91           N
ATOM    147  CZ  ARG A  21      32.235  25.658  25.242  1.00 33.76           C
ATOM    148  NH1 ARG A  21      32.584  26.669  26.020  1.00 38.80           N
ATOM    149  NH2 ARG A  21      32.572  25.660  23.958  1.00 44.47           N
ATOM    150  N   GLN A  22      26.529  27.338  28.397  1.00 36.46           N
ATOM    151  CA  GLN A  22      25.994  28.316  29.330  1.00 39.08           C
ATOM    152  C   GLN A  22      24.515  28.207  29.614  1.00 41.81           C
ATOM    153  O   GLN A  22      24.063  28.607  30.686  1.00 43.56           O
ATOM    154  CB  GLN A  22      26.313  29.722  28.868  1.00 40.00           C
ATOM    155  CG  GLN A  22      27.581  30.237  29.461  1.00 47.83           C
ATOM    156  CD  GLN A  22      27.908  31.610  28.972  1.00 50.44           C
ATOM    157  OE1 GLN A  22      28.967  31.832  28.378  1.00 54.03           O
ATOM    158  NE2 GLN A  22      26.998  32.550  29.203  1.00 51.37           N
ATOM    159  N   LEU A  23      23.753  27.708  28.649  1.00 41.76           N
ATOM    160  CA  LEU A  23      22.318  27.564  28.843  1.00 45.71           C
ATOM    161  C   LEU A  23      21.988  26.261  29.566  1.00 49.37           C
ATOM    162  O   LEU A  23      20.936  26.129  30.198  1.00 52.41           O
ATOM    163  CB  LEU A  23      21.562  27.657  27.515  1.00 39.19           C
ATOM    164  CG  LEU A  23      21.473  29.028  26.837  1.00 35.15           C
ATOM    165  CD1 LEU A  23      20.498  28.931  25.679  1.00 32.29           C
ATOM    166  CD2 LEU A  23      21.012  30.092  27.808  1.00 30.41           C
ATOM    167  N   GLU A  24      22.900  25.303  29.480  1.00 52.04           N
ATOM    168  CA  GLU A  24      22.722  24.026  30.145  1.00 57.09           C
ATOM    169  C   GLU A  24      22.812  24.268  31.649  1.00 59.69           C
ATOM    170  O   GLU A  24      22.184  23.569  32.440  1.00 59.79           O
ATOM    171  CB  GLU A  24      23.828  23.080  29.709  1.00 58.51           C
ATOM    172  CG  GLU A  24      23.376  21.663  29.479  1.00 63.84           C
ATOM    173  CD  GLU A  24      24.291  20.940  28.514  1.00 68.43           C
ATOM    174  OE1 GLU A  24      25.532  21.092  28.629  1.00 67.19           O
ATOM    175  OE2 GLU A  24      23.764  20.240  27.622  1.00 70.80           O
ATOM    176  N   GLN A  25      23.561  25.303  32.020  1.00 63.22           N
ATOM    177  CA  GLN A  25      23.770  25.681  33.413  1.00 66.53           C
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ATOM    178  C   GLN A  25      22.643  26.535  34.009  1.00 67.56           C
ATOM    179  O   GLN A  25      22.894  27.547  34.668  1.00 67.76           O
ATOM    180  CB  GLN A  25      25.122  26.389  33.553  1.00 69.35           C
ATOM    181  CG  GLN A  25      26.298  25.521  33.114  1.00 77.88           C
ATOM    182  CD  GLN A  25      27.632  26.252  33.141  1.00 82.94           C
ATOM    183  OE1 GLN A  25      28.435  26.067  34.057  1.00 85.78           O
ATOM    184  NE2 GLN A  25      27.883  27.072  32.123  1.00 83.64           N
ATOM    185  N   ARG A  26      21.402  26.138  33.735  1.00 67.00           N
ATOM    186  CA  ARG A  26      20.206  26.811  34.246  1.00 65.87           C
ATOM    187  C   ARG A  26      18.943  26.059  33.853  1.00 65.99           C
ATOM    188  O   ARG A  26      18.753  25.685  32.693  1.00 66.80           O
ATOM    189  CB  ARG A  26      20.131  28.291  33.842  1.00 63.65           C
ATOM    190  CG  ARG A  26      20.686  28.647  32.484  1.00 58.79           C
ATOM    191  CD  ARG A  26      20.670  30.150  32.294  1.00 53.82           C
ATOM    192  NE  ARG A  26      19.327  30.623  31.978  1.00 50.88           N
ATOM    193  CZ  ARG A  26      19.057  31.782  31.386  1.00 48.98           C
ATOM    194  NH1 ARG A  26      20.033  32.616  31.049  1.00 44.90           N
ATOM    195  NH2 ARG A  26      17.811  32.070  31.050  1.00 47.12           N
ATOM    196  N   GLY A  27      18.097  25.828  34.852  1.00 67.01           N
ATOM    197  CA  GLY A  27      16.868  25.081  34.656  1.00 67.12           C
ATOM    198  C   GLY A  27      15.635  25.821  34.183  1.00 67.63           C
ATOM    199  O   GLY A  27      14.587  25.194  33.999  1.00 68.33           O
ATOM    200  N   ASP A  28      15.728  27.138  34.014  1.00 66.03           N
ATOM    201  CA  ASP A  28      14.580  27.913  33.535  1.00 64.38           C
ATOM    202  C   ASP A  28      14.477  27.812  32.014  1.00 61.71           C
ATOM    203  O   ASP A  28      13.629  28.457  31.390  1.00 61.13           O
ATOM    204  CB  ASP A  28      14.683  29.384  33.970  1.00 65.70           C
ATOM    205  CG  ASP A  28      15.896  30.101  33.386  1.00 66.15           C
ATOM    206  OD1 ASP A  28      16.975  29.482  33.246  1.00 66.43           O
ATOM    207  OD2 ASP A  28      15.767  31.306  33.083  1.00 66.47           O
ATOM    208  N   VAL A  29      15.324  26.950  31.449  1.00 56.84           N
ATOM    209  CA  VAL A  29      15.415  26.716  30.014  1.00 51.99           C
ATOM    210  C   VAL A  29      15.528  25.220  29.717  1.00 48.66           C
ATOM    211  O   VAL A  29      16.215  24.492  30.428  1.00 51.10           O
ATOM    212  CB  VAL A  29      16.683  27.430  29.439  1.00 51.38           C
ATOM    213  CG1 VAL A  29      16.912  27.053  27.987  1.00 49.25           C
ATOM    214  CG2 VAL A  29      16.560  28.942  29.583  1.00 47.60           C
ATOM    215  N   GLU A  30      14.854  24.775  28.664  1.00 46.51           N
ATOM    216  CA  GLU A  30      14.910  23.380  28.236  1.00 48.07           C
ATOM    217  C   GLU A  30      15.451  23.378  26.802  1.00 45.23           C
ATOM    218  O   GLU A  30      14.853  23.989  25.919  1.00 46.59           O
ATOM    219  CB  GLU A  30      13.517  22.755  28.256  1.00 54.73           C
ATOM    220  CG  GLU A  30      13.541  21.239  28.116  1.00 64.89           C
ATOM    221  CD  GLU A  30      12.210  20.651  27.679  1.00 70.38           C
ATOM    222  OE1 GLU A  30      11.149  21.254  27.970  1.00 73.58           O
ATOM    223  OE2 GLU A  30      12.236  19.576  27.036  1.00 71.02           O
ATOM    224  N   LEU A  31      16.555  22.672  26.564  1.00 40.43           N
ATOM    225  CA  LEU A  31      17.177  22.645  25.238  1.00 38.79           C
ATOM    226  C   LEU A  31      16.708  21.580  24.249  1.00 39.05           C
ATOM    227  O   LEU A  31      16.612  20.405  24.581  1.00 43.94           O
ATOM    228  CB  LEU A  31      18.701  22.559  25.375  1.00 38.55           C
ATOM    229  CG  LEU A  31      19.421  23.657  26.167  1.00 39.30           C
ATOM    230  CD1 LEU A  31      20.881  23.294  26.303  1.00 42.53           C
ATOM    231  CD2 LEU A  31      19.278  25.010  25.492  1.00 39.73           C
ATOM    232  N   VAL A  32      16.432  22.010  23.020  1.00 39.83           N
ATOM    233  CA  VAL A  32      16.011  21.120  21.932  1.00 37.75           C
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ATOM    234  C   VAL A  32      17.186  21.164  20.960  1.00 38.86           C
ATOM    235  O   VAL A  32      17.497  22.216  20.404  1.00 40.67           O
ATOM    236  CB  VAL A  32      14.726  21.643  21.228  1.00 38.00           C
ATOM    237  CG1 VAL A  32      14.294  20.692  20.117  1.00 29.60           C
ATOM    238  CG2 VAL A  32      13.608  21.833  22.247  1.00 34.28           C
ATOM    239  N   LEU A  33      17.881  20.043  20.817  1.00 38.26           N
ATOM    240  CA  LEU A  33      19.051  19.984  19.951  1.00 37.51           C
ATOM    241  C   LEU A  33      18.917  18.884  18.917  1.00 39.70           C
ATOM    242  O   LEU A  33      18.350  17.831  19.195  1.00 42.91           O
ATOM    243  CB  LEU A  33      20.307  19.757  20.796  1.00 37.35           C
ATOM    244  CG  LEU A  33      20.475  20.665  22.026  1.00 37.37           C
ATOM    245  CD1 LEU A  33      21.648  20.193  22.860  1.00 35.76           C
ATOM    246  CD2 LEU A  33      20.654  22.126  21.624  1.00 36.53           C
ATOM    247  N   ARG A  34      19.478  19.118  17.737  1.00 38.49           N
ATOM    248  CA  ARG A  34      19.421  18.165  16.638  1.00 39.48           C
ATOM    249  C   ARG A  34      20.757  18.167  15.917  1.00 42.28           C
ATOM    250  O   ARG A  34      21.274  19.228  15.586  1.00 43.64           O
ATOM    251  CB  ARG A  34      18.329  18.592  15.659  1.00 40.22           C
ATOM    252  CG  ARG A  34      17.155  17.649  15.534  1.00 43.09           C
ATOM    253  CD  ARG A  34      16.710  17.180  16.879  1.00 44.23           C
ATOM    254  NE  ARG A  34      15.293  16.867  16.922  1.00 44.49           N
ATOM    255  CZ  ARG A  34      14.573  16.906  18.034  1.00 46.08           C
ATOM    256  NH1 ARG A  34      15.146  17.236  19.187  1.00 46.87           N
ATOM    257  NH2 ARG A  34      13.273  16.662  17.989  1.00 47.09           N
ATOM    258  N   THR A  35      21.329  16.989  15.689  1.00 43.97           N
ATOM    259  CA  THR A  35      22.602  16.904  14.974  1.00 45.87           C
ATOM    260  C   THR A  35      22.336  17.035  13.478  1.00 47.43           C
ATOM    261  O   THR A  35      21.181  16.994  13.041  1.00 45.83           O
ATOM    262  CB  THR A  35      23.313  15.559  15.205  1.00 43.91           C
ATOM    263  OG1 THR A  35      22.489  14.491  14.720  1.00 45.89           O
ATOM    264  CG2 THR A  35      23.625  15.354  16.673  1.00 39.73           C
ATOM    265  N   ARG A  36      23.408  17.184  12.694  1.00 48.50           N
ATOM    266  CA  ARG A  36      23.271  17.308  11.242  1.00 49.16           C
ATOM    267  C   ARG A  36      22.631  16.037  10.687  1.00 49.57           C
ATOM    268  O   ARG A  36      21.870  16.072   9.692  1.00 48.38           O
ATOM    269  CB  ARG A  36      24.628  17.525  10.577  1.00 49.50           C
ATOM    270  CG  ARG A  36      24.510  17.511   9.053  1.00 53.20           C
ATOM    271  CD  ARG A  36      25.877  17.333   8.397  1.00 54.57           C
ATOM    272  NE  ARG A  36      26.708  18.530   8.547  1.00 54.62           N
ATOM    273  CZ  ARG A  36      26.838  19.470   7.603  1.00 54.52           C
ATOM    274  NH1 ARG A  36      26.173  19.357   6.446  1.00 54.97           N
ATOM    275  NH2 ARG A  36      27.699  20.473   7.766  1.00 53.24           N
ATOM    276  N   ASP A  37      22.946  14.904  11.322  1.00 51.90           N
ATOM    277  CA  ASP A  37      22.364  13.631  10.887  1.00 54.11           C
ATOM    278  C   ASP A  37      20.888  13.520  11.271  1.00 50.88           C
ATOM    279  O   ASP A  37      20.115  12.844  10.565  1.00 50.88           O
ATOM    280  CB  ASP A  37      23.148  12.448  11.463  1.00 61.89           C
ATOM    281  CG  ASP A  37      24.477  12.223  10.733  1.00 68.54           C
ATOM    282  OD1 ASP A  37      24.540  12.518   9.482  1.00 70.79           O
ATOM    283  OD2 ASP A  37      25.469  11.768  11.410  1.00 72.97           O
ATOM    284  N   GLU A  38      20.500  14.168  12.369  1.00 48.31           N
ATOM    285  CA  GLU A  38      19.112  14.140  12.806  1.00 45.48           C
ATOM    286  C   GLU A  38      18.261  15.157  12.040  1.00 44.85           C
ATOM    287  O   GLU A  38      17.081  14.917  11.775  1.00 44.04           O
ATOM    288  CB  GLU A  38      19.011  14.427  14.301  1.00 48.73           C
ATOM    289  CG  GLU A  38      19.594  13.362  15.199  1.00 53.37           C
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ATOM    290  CD  GLU A  38      19.430  13.711  16.664  1.00 58.58           C
ATOM    291  OE1 GLU A  38      20.295  14.423  17.218  1.00 60.16           O
ATOM    292  OE2 GLU A  38      18.419  13.292  17.265  1.00 62.76           O
ATOM    293  N   LEU A  39      18.855  16.293  11.687  1.00 41.50           N
ATOM    294  CA  LEU A  39      18.113  17.321  10.968  1.00 38.30           C
ATOM    295  C   LEU A  39      19.001  18.089  10.006  1.00 37.08           C
ATOM    296  O   LEU A  39      19.888  18.829  10.430  1.00 34.86           O
ATOM    297  CB  LEU A  39      17.475  18.303  11.957  1.00 34.87           C
ATOM    298  CG  LEU A  39      16.656  19.464  11.373  1.00 35.83           C
ATOM    299  CD1 LEU A  39      15.423  18.927  10.673  1.00 33.47           C
ATOM    300  CD2 LEU A  39      16.265  20.449  12.472  1.00 31.29           C
ATOM    301  N   ASN A  40      18.779  17.897   8.711  1.00 37.68           N
ATOM    302  CA  ASN A  40      19.562  18.617   7.719  1.00 36.32           C
ATOM    303  C   ASN A  40      18.935  19.992   7.503  1.00 32.98           C
ATOM    304  O   ASN A  40      17.858  20.108   6.907  1.00 29.82           O
ATOM    305  CB  ASN A  40      19.618  17.855   6.397  1.00 40.22           C
ATOM    306  CG  ASN A  40      20.536  18.522   5.390  1.00 43.35           C
ATOM    307  OD1 ASN A  40      21.367  19.362   5.750  1.00 42.66           O
ATOM    308  ND2 ASN A  40      20.383  18.162   4.120  1.00 43.07           N
ATOM    309  N   LEU A  41      19.626  21.030   7.967  1.00 29.70           N
ATOM    310  CA  LEU A  41      19.134  22.395   7.858  1.00 28.83           C
ATOM    311  C   LEU A  41      18.995  22.938   6.434  1.00 29.73           C
ATOM    312  O   LEU A  41      18.363  23.968   6.222  1.00 28.44           O
ATOM    313  CB  LEU A  41      19.973  23.332   8.723  1.00 24.99           C
ATOM    314  CG  LEU A  41      19.959  23.045  10.226  1.00 24.91           C
ATOM    315  CD1 LEU A  41      20.864  24.012  10.938  1.00 25.14           C
ATOM    316  CD2 LEU A  41      18.559  23.150  10.792  1.00 24.69           C
ATOM    317  N   LEU A  42      19.577  22.251   5.457  1.00 32.21           N
ATOM    318  CA  LEU A  42      19.455  22.675   4.057  1.00 33.93           C
ATOM    319  C   LEU A  42      18.115  22.218   3.477  1.00 35.76           C
ATOM    320  O   LEU A  42      17.639  22.763   2.478  1.00 37.82           O
ATOM    321  CB  LEU A  42      20.591  22.103   3.207  1.00 31.23           C
ATOM    322  CG  LEU A  42      21.990  22.664   3.460  1.00 36.80           C
ATOM    323  CD1 LEU A  42      22.999  21.943   2.592  1.00 35.14           C
ATOM    324  CD2 LEU A  42      22.000  24.149   3.157  1.00 33.92           C
ATOM    325  N   ASP A  43      17.517  21.214   4.112  1.00 36.08           N
ATOM    326  CA  ASP A  43      16.239  20.659   3.684  1.00 37.80           C
ATOM    327  C   ASP A  43      15.070  21.476   4.261  1.00 38.26           C
ATOM    328  O   ASP A  43      14.749  21.370   5.449  1.00 37.57           O
ATOM    329  CB  ASP A  43      16.162  19.190   4.132  1.00 39.46           C
ATOM    330  CG  ASP A  43      14.967  18.426   3.537  1.00 40.27           C
ATOM    331  OD1 ASP A  43      14.109  18.999   2.825  1.00 42.87           O
ATOM    332  OD2 ASP A  43      14.894  17.212   3.795  1.00 43.06           O
ATOM    333  N   SER A  44      14.418  22.256   3.397  1.00 37.79           N
ATOM    334  CA  SER A  44      13.282  23.098   3.784  1.00 39.19           C
ATOM    335  C   SER A  44      12.146  22.340   4.481  1.00 38.48           C
ATOM    336  O   SER A  44      11.696  22.757   5.549  1.00 37.63           O
ATOM    337  CB  SER A  44      12.722  23.831   2.560  1.00 39.04           C
ATOM    338  OG  SER A  44      13.722  24.604   1.926  1.00 46.91           O
ATOM    339  N   ARG A  45      11.689  21.239   3.873  1.00 36.92           N
ATOM    340  CA  ARG A  45      10.597  20.423   4.422  1.00 36.41           C
ATOM    341  C   ARG A  45      10.936  19.847   5.795  1.00 34.11           C
ATOM    342  O   ARG A  45      10.115  19.883   6.707  1.00 36.39           O
ATOM    343  CB  ARG A  45      10.202  19.293   3.433  1.00 35.35           C
ATOM    344  N   ALA A  46      12.166  19.373   5.955  1.00 33.82           N
ATOM    345  CA  ALA A  46      12.607  18.810   7.228  1.00 33.22           C
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ATOM    346  C   ALA A  46      12.586  19.870   8.333  1.00 33.66           C
ATOM    347  O   ALA A  46      12.149  19.605   9.464  1.00 35.07           O
ATOM    348  CB  ALA A  46      14.006  18.226   7.084  1.00 32.17           C
ATOM    349  N   VAL A  47      13.041  21.074   7.991  1.00 31.27           N
ATOM    350  CA  VAL A  47      13.077  22.174   8.946  1.00 30.24           C
ATOM    351  C   VAL A  47      11.665  22.606   9.352  1.00 31.13           C
ATOM    352  O   VAL A  47      11.403  22.827  10.537  1.00 32.08           O
ATOM    353  CB  VAL A  47      13.913  23.365   8.400  1.00 29.11           C
ATOM    354  CG1 VAL A  47      13.929  24.533   9.385  1.00 29.36           C
ATOM    355  CG2 VAL A  47      15.337  22.909   8.155  1.00 25.20           C
ATOM    356  N   HIS A  48      10.751  22.715   8.388  1.00 35.31           N
ATOM    357  CA  HIS A  48       9.376  23.096   8.717  1.00 38.94           C
ATOM    358  C   HIS A  48       8.721  22.004   9.562  1.00 38.54           C
ATOM    359  O   HIS A  48       8.069  22.301  10.559  1.00 38.19           O
ATOM    360  CB  HIS A  48       8.558  23.397   7.458  1.00 41.94           C
ATOM    361  CG  HIS A  48       8.829  24.754   6.876  1.00 56.13           C
ATOM    362  ND1 HIS A  48       9.990  25.058   6.190  1.00 59.59           N
ATOM    363  CD2 HIS A  48       8.098  25.896   6.892  1.00 58.33           C
ATOM    364  CE1 HIS A  48       9.962  26.324   5.812  1.00 57.68           C
ATOM    365  NE2 HIS A  48       8.824  26.856   6.226  1.00 57.78           N
ATOM    366  N   ASP A  49       8.965  20.742   9.210  1.00 41.61           N
ATOM    367  CA  ASP A  49       8.408  19.616   9.959  1.00 42.36           C
ATOM    368  C   ASP A  49       8.860  19.645  11.405  1.00 41.75           C
ATOM    369  O   ASP A  49       8.058  19.428  12.313  1.00 42.14           O
ATOM    370  CB  ASP A  49       8.809  18.288   9.330  1.00 45.77           C
ATOM    371  CG  ASP A  49       7.985  17.948   8.094  1.00 52.81           C
ATOM    372  OD1 ASP A  49       7.091  18.742   7.709  1.00 53.04           O
ATOM    373  OD2 ASP A  49       8.235  16.870   7.506  1.00 56.26           O
ATOM    374  N   PHE A  50      10.146  19.921  11.609  1.00 38.69           N
ATOM    375  CA  PHE A  50      10.714  20.005  12.945  1.00 35.96           C
ATOM    376  C   PHE A  50      10.061  21.131  13.754  1.00 36.38           C
ATOM    377  O   PHE A  50       9.643  20.921  14.889  1.00 36.72           O
ATOM    378  CB  PHE A  50      12.230  20.217  12.856  1.00 34.10           C
ATOM    379  CG  PHE A  50      12.850  20.720  14.131  1.00 34.38           C
ATOM    380  CD1 PHE A  50      13.101  19.857  15.188  1.00 34.43           C
ATOM    381  CD2 PHE A  50      13.172  22.070  14.280  1.00 36.91           C
ATOM    382  CE1 PHE A  50      13.664  20.332  16.381  1.00 35.07           C
ATOM    383  CE2 PHE A  50      13.734  22.558  15.468  1.00 35.30           C
ATOM    384  CZ  PHE A  50      13.980  21.688  16.517  1.00 35.27           C
ATOM    385  N   PHE A  51       9.985  22.327  13.179  1.00 36.53           N
ATOM    386  CA  PHE A  51       9.388  23.462  13.880  1.00 36.38           C
ATOM    387  C   PHE A  51       7.903  23.247  14.159  1.00 39.77           C
ATOM    388  O   PHE A  51       7.341  23.802  15.119  1.00 36.92           O
ATOM    389  CB  PHE A  51       9.602  24.752  13.091  1.00 34.24           C
ATOM    390  CG  PHE A  51      10.905  25.447  13.400  1.00 33.88           C
ATOM    391  CD1 PHE A  51      11.046  26.210  14.556  1.00 32.20           C
ATOM    392  CD2 PHE A  51      11.990  25.350  12.530  1.00 33.92           C
ATOM    393  CE1 PHE A  51      12.254  26.873  14.841  1.00 36.14           C
ATOM    394  CE2 PHE A  51      13.200  26.011  12.809  1.00 34.40           C
ATOM    395  CZ  PHE A  51      13.328  26.772  13.966  1.00 28.85           C
ATOM    396  N   ALA A  52       7.277  22.435  13.309  1.00 41.91           N
ATOM    397  CA  ALA A  52       5.860  22.106  13.443  1.00 45.03           C
ATOM    398  C   ALA A  52       5.613  21.070  14.551  1.00 46.49           C
ATOM    399  O   ALA A  52       4.607  21.145  15.254  1.00 49.13           O
ATOM    400  CB  ALA A  52       5.308  21.598  12.113  1.00 42.39           C
ATOM    401  N   SER A  53       6.532  20.114  14.700  1.00 46.86           N
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ATOM    402  CA  SER A  53       6.417  19.068  15.713  1.00 46.18           C
ATOM    403  C   SER A  53       6.841  19.528  17.091  1.00 47.30           C
ATOM    404  O   SER A  53       6.224  19.149  18.076  1.00 50.58           O
ATOM    405  CB  SER A  53       7.252  17.859  15.326  1.00 46.02           C
ATOM    406  OG  SER A  53       6.846  17.376  14.064  1.00 55.98           O
ATOM    407  N   GLU A  54       7.929  20.289  17.166  1.00 46.61           N
ATOM    408  CA  GLU A  54       8.427  20.789  18.443  1.00 47.30           C
ATOM    409  C   GLU A  54       7.778  22.111  18.795  1.00 48.35           C
ATOM    410  O   GLU A  54       7.229  22.795  17.928  1.00 53.70           O
ATOM    411  CB  GLU A  54       9.945  20.971  18.404  1.00 47.96           C
ATOM    412  CG  GLU A  54      10.719  19.709  18.095  1.00 49.95           C
ATOM    413  CD  GLU A  54      10.381  18.567  19.033  1.00 56.61           C
ATOM    414  OE1 GLU A  54      10.360  18.777  20.264  1.00 53.61           O
ATOM    415  OE2 GLU A  54      10.127  17.454  18.529  1.00 63.34           O
ATOM    416  N   ARG A  55       7.828  22.469  20.071  1.00 46.72           N
ATOM    417  CA  ARG A  55       7.250  23.727  20.513  1.00 48.22           C
ATOM    418  C   ARG A  55       8.415  24.620  20.925  1.00 47.65           C
ATOM    419  O   ARG A  55       8.802  24.656  22.093  1.00 52.64           O
ATOM    420  CB  ARG A  55       6.284  23.494  21.679  1.00 49.08           C
ATOM    421  N   ILE A  56       8.986  25.316  19.945  1.00 44.38           N
ATOM    422  CA  ILE A  56      10.137  26.193  20.167  1.00 38.21           C
ATOM    423  C   ILE A  56       9.743  27.600  20.594  1.00 34.25           C
ATOM    424  O   ILE A  56       8.851  28.214  20.011  1.00 35.06           O
ATOM    425  CB  ILE A  56      11.027  26.295  18.888  1.00 36.14           C
ATOM    426  CG1 ILE A  56      11.429  24.901  18.383  1.00 35.12           C
ATOM    427  CG2 ILE A  56      12.276  27.104  19.180  1.00 34.57           C
ATOM    428  CD1 ILE A  56      12.127  24.062  19.424  1.00 36.54           C
ATOM    429  N   ASP A  57      10.414  28.108  21.619  1.00 31.45           N
ATOM    430  CA  ASP A  57      10.148  29.456  22.096  1.00 33.09           C
ATOM    431  C   ASP A  57      11.223  30.428  21.604  1.00 34.76           C
ATOM    432  O   ASP A  57      10.916  31.568  21.259  1.00 33.91           O
ATOM    433  CB  ASP A  57      10.060  29.489  23.626  1.00 36.39           C
ATOM    434  CG  ASP A  57       8.905  28.659  24.160  1.00 37.50           C
ATOM    435  OD1 ASP A  57       7.743  28.993  23.856  1.00 45.83           O
ATOM    436  OD2 ASP A  57       9.153  27.660  24.863  1.00 38.82           O
ATOM    437  N   GLN A  58      12.477  29.975  21.566  1.00 32.90           N
ATOM    438  CA  GLN A  58      13.602  30.808  21.121  1.00 29.00           C
ATOM    439  C   GLN A  58      14.524  30.032  20.200  1.00 26.40           C
ATOM    440  O   GLN A  58      14.606  28.809  20.285  1.00 25.66           O
ATOM    441  CB  GLN A  58      14.419  31.291  22.315  1.00 30.53           C
ATOM    442  CG  GLN A  58      13.667  32.158  23.291  1.00 33.88           C
ATOM    443  CD  GLN A  58      14.518  32.547  24.476  1.00 37.21           C
ATOM    444  OE1 GLN A  58      15.749  32.485  24.421  1.00 42.50           O
ATOM    445  NE2 GLN A  58      13.871  32.953  25.557  1.00 39.12           N
ATOM    446  N   VAL A  59      15.193  30.746  19.301  1.00 26.05           N
ATOM    447  CA  VAL A  59      16.137  30.122  18.374  1.00 22.51           C
ATOM    448  C   VAL A  59      17.455  30.887  18.314  1.00 23.59           C
ATOM    449  O   VAL A  59      17.470  32.115  18.157  1.00 21.64           O
ATOM    450  CB  VAL A  59      15.589  30.050  16.933  1.00 18.55           C
ATOM    451  CG1 VAL A  59      16.663  29.503  15.993  1.00 19.71           C
ATOM    452  CG2 VAL A  59      14.365  29.173  16.866  1.00 17.82           C
ATOM    453  N   TYR A  60      18.548  30.168  18.544  1.00 23.40           N
ATOM    454  CA  TYR A  60      19.885  30.739  18.431  1.00 23.22           C
ATOM    455  C   TYR A  60      20.402  30.137  17.131  1.00 22.40           C
ATOM    456  O   TYR A  60      20.632  28.930  17.046  1.00 22.12           O
ATOM    457  CB  TYR A  60      20.784  30.329  19.593  1.00 22.37           C
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ATOM    458  CG  TYR A  60      20.551  31.126  20.848  1.00 23.48           C
ATOM    459  CD1 TYR A  60      19.590  30.726  21.779  1.00 30.06           C
ATOM    460  CD2 TYR A  60      21.299  32.267  21.125  1.00 23.94           C
ATOM    461  CE1 TYR A  60      19.377  31.448  22.960  1.00 27.36           C
ATOM    462  CE2 TYR A  60      21.098  32.994  22.308  1.00 24.58           C
ATOM    463  CZ  TYR A  60      20.132  32.573  23.216  1.00 27.54           C
ATOM    464  OH  TYR A  60      19.917  33.263  24.385  1.00 28.85           O
ATOM    465  N   LEU A  61      20.512  30.966  16.097  1.00 22.99           N
ATOM    466  CA  LEU A  61      20.961  30.487  14.799  1.00 25.82           C
ATOM    467  C   LEU A  61      22.475  30.549  14.729  1.00 22.08           C
ATOM    468  O   LEU A  61      23.044  31.570  14.352  1.00 21.76           O
ATOM    469  CB  LEU A  61      20.270  31.301  13.690  1.00 24.75           C
ATOM    470  CG  LEU A  61      20.471  31.019  12.192  1.00 29.56           C
ATOM    471  CD1 LEU A  61      20.868  29.581  11.898  1.00 31.09           C
ATOM    472  CD2 LEU A  61      19.207  31.410  11.446  1.00 23.57           C
ATOM    473  N   ALA A  62      23.113  29.453  15.141  1.00 22.39           N
ATOM    474  CA  ALA A  62      24.578  29.344  15.164  1.00 22.94           C
ATOM    475  C   ALA A  62      25.120  28.339  14.156  1.00 23.39           C
ATOM    476  O   ALA A  62      26.289  27.973  14.210  1.00 27.97           O
ATOM    477  CB  ALA A  62      25.072  28.989  16.579  1.00 19.79           C
ATOM    478  N   ALA A  63      24.257  27.863  13.267  1.00 24.40           N
ATOM    479  CA  ALA A  63      24.659  26.923  12.231  1.00 26.04           C
ATOM    480  C   ALA A  63      25.142  27.736  11.028  1.00 27.62           C
ATOM    481  O   ALA A  63      24.532  28.744  10.672  1.00 29.22           O
ATOM    482  CB  ALA A  63      23.485  26.037  11.825  1.00 20.58           C
ATOM    483  N   ALA A  64      26.243  27.294  10.426  1.00 26.22           N
ATOM    484  CA  ALA A  64      26.828  27.959   9.269  1.00 27.08           C
ATOM    485  C   ALA A  64      27.922  27.119   8.640  1.00 28.18           C
ATOM    486  O   ALA A  64      28.433  26.175   9.241  1.00 30.26           O
ATOM    487  CB  ALA A  64      27.406  29.333   9.669  1.00 22.21           C
ATOM    488  N   LYS A  65      28.227  27.435   7.390  1.00 28.72           N
ATOM    489  CA  LYS A  65      29.304  26.791   6.652  1.00 28.54           C
ATOM    490  C   LYS A  65      30.407  27.826   6.851  1.00 28.48           C
ATOM    491  O   LYS A  65      30.325  28.939   6.344  1.00 28.49           O
ATOM    492  CB  LYS A  65      28.933  26.656   5.174  1.00 33.53           C
ATOM    493  CG  LYS A  65      30.090  26.346   4.236  1.00 36.98           C
ATOM    494  CD  LYS A  65      30.525  24.925   4.377  1.00 38.88           C
ATOM    495  CE  LYS A  65      31.520  24.579   3.300  1.00 40.88           C
ATOM    496  NZ  LYS A  65      31.750  23.117   3.262  1.00 46.04           N
ATOM    497  N   VAL A  66      31.372  27.480   7.694  1.00 29.22           N
ATOM    498  CA  VAL A  66      32.483  28.355   8.062  1.00 27.65           C
ATOM    499  C   VAL A  66      33.849  27.785   7.639  1.00 27.24           C
ATOM    500  O   VAL A  66      34.011  26.572   7.494  1.00 29.34           O
ATOM    501  CB  VAL A  66      32.445  28.554   9.593  1.00 28.25           C
ATOM    502  CG1 VAL A  66      33.584  29.406  10.070  1.00 34.57           C
ATOM    503  CG2 VAL A  66      31.133  29.171   9.981  1.00 27.37           C
ATOM    504  N   GLY A  67      34.826  28.661   7.438  1.00 25.22           N
ATOM    505  CA  GLY A  67      36.147  28.201   7.053  1.00 25.93           C
ATOM    506  C   GLY A  67      37.162  29.321   6.971  1.00 28.18           C
ATOM    507  O   GLY A  67      36.842  30.485   7.224  1.00 27.61           O
ATOM    508  N   GLY A  68      38.397  28.946   6.631  1.00 27.98           N
ATOM    509  CA  GLY A  68      39.476  29.905   6.499  1.00 25.02           C
ATOM    510  C   GLY A  68      39.638  30.474   5.095  1.00 26.32           C
ATOM    511  O   GLY A  68      38.799  30.260   4.215  1.00 26.88           O
ATOM    512  N   ILE A  69      40.734  31.201   4.896  1.00 26.63           N
ATOM    513  CA  ILE A  69      41.082  31.838   3.629  1.00 25.70           C
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ATOM    514  C   ILE A  69      41.072  30.872   2.444  1.00 24.70           C
ATOM    515  O   ILE A  69      40.489  31.177   1.409  1.00 21.68           O
ATOM    516  CB  ILE A  69      42.454  32.557   3.762  1.00 30.40           C
ATOM    517  CG1 ILE A  69      42.286  33.791   4.647  1.00 32.78           C
ATOM    518  CG2 ILE A  69      43.016  32.945   2.410  1.00 31.41           C
ATOM    519  CD1 ILE A  69      43.586  34.423   5.080  1.00 40.98           C
ATOM    520  N   VAL A  70      41.678  29.699   2.605  1.00 22.48           N
ATOM    521  CA  VAL A  70      41.702  28.714   1.521  1.00 22.87           C
ATOM    522  C   VAL A  70      40.299  28.201   1.156  1.00 24.18           C
ATOM    523  O   VAL A  70      39.928  28.181  -0.020  1.00 24.50           O
ATOM    524  CB  VAL A  70      42.655  27.517   1.839  1.00 21.52           C
ATOM    525  CG1 VAL A  70      42.551  26.432   0.767  1.00 20.34           C
ATOM    526  CG2 VAL A  70      44.093  28.011   1.911  1.00 19.88           C
ATOM    527  N   ALA A  71      39.509  27.844   2.166  1.00 22.21           N
ATOM    528  CA  ALA A  71      38.166  27.331   1.939  1.00 21.76           C
ATOM    529  C   ALA A  71      37.254  28.351   1.261  1.00 21.94           C
ATOM    530  O   ALA A  71      36.580  28.026   0.279  1.00 24.88           O
ATOM    531  CB  ALA A  71      37.561  26.846   3.251  1.00 20.17           C
ATOM    532  N   ASN A  72      37.247  29.585   1.759  1.00 21.74           N
ATOM    533  CA  ASN A  72      36.405  30.632   1.171  1.00 24.24           C
ATOM    534  C   ASN A  72      36.683  30.926  -0.304  1.00 25.08           C
ATOM    535  O   ASN A  72      35.764  31.252  -1.053  1.00 27.00           O
ATOM    536  CB  ASN A  72      36.467  31.915   2.002  1.00 24.90           C
ATOM    537  CG  ASN A  72      35.587  31.842   3.231  1.00 27.78           C
ATOM    538  OD1 ASN A  72      36.016  31.370   4.281  1.00 27.90           O
ATOM    539  ND2 ASN A  72      34.334  32.265   3.094  1.00 21.38           N
ATOM    540  N   ASN A  73      37.946  30.810  -0.711  1.00 22.93           N
ATOM    541  CA  ASN A  73      38.336  31.030  -2.099  1.00 22.83           C
ATOM    542  C   ASN A  73      38.244  29.749  -2.936  1.00 24.17           C
ATOM    543  O   ASN A  73      38.204  29.810  -4.164  1.00 26.68           O
ATOM    544  CB  ASN A  73      39.762  31.560  -2.181  1.00 21.59           C
ATOM    545  CG  ASN A  73      39.857  33.043  -1.908  1.00 25.57           C
ATOM    546  OD1 ASN A  73      39.280  33.867  -2.627  1.00 28.53           O
ATOM    547  ND2 ASN A  73      40.631  33.400  -0.887  1.00 27.04           N
ATOM    548  N   THR A  74      38.248  28.594  -2.275  1.00 23.32           N
ATOM    549  CA  THR A  74      38.168  27.315  -2.973  1.00 22.31           C
ATOM    550  C   THR A  74      36.730  26.833  -3.200  1.00 22.04           C
ATOM    551  O   THR A  74      36.413  26.317  -4.274  1.00 20.28           O
ATOM    552  CB  THR A  74      38.978  26.237  -2.240  1.00 24.22           C
ATOM    553  OG1 THR A  74      40.342  26.658  -2.171  1.00 20.49           O
ATOM    554  CG2 THR A  74      38.894  24.895  -2.968  1.00 20.05           C
ATOM    555  N   TYR A  75      35.853  27.037  -2.216  1.00 19.87           N
ATOM    556  CA  TYR A  75      34.459  26.618  -2.350  1.00 20.36           C
ATOM    557  C   TYR A  75      33.489  27.789  -2.189  1.00 21.70           C
ATOM    558  O   TYR A  75      32.560  27.713  -1.394  1.00 21.56           O
ATOM    559  CB  TYR A  75      34.128  25.573  -1.293  1.00 23.53           C
ATOM    560  CG  TYR A  75      35.165  24.493  -1.136  1.00 29.07           C
ATOM    561  CD1 TYR A  75      35.107  23.337  -1.908  1.00 33.08           C
ATOM    562  CD2 TYR A  75      36.201  24.621  -0.207  1.00 30.54           C
ATOM    563  CE1 TYR A  75      36.055  22.321  -1.762  1.00 37.73           C
ATOM    564  CE2 TYR A  75      37.154  23.619  -0.053  1.00 34.16           C
ATOM    565  CZ  TYR A  75      37.073  22.472  -0.834  1.00 38.19           C
ATOM    566  OH  TYR A  75      37.997  21.466  -0.694  1.00 41.23           O
ATOM    567  N   PRO A  76      33.665  28.872  -2.969  1.00 20.81           N
ATOM    568  CA  PRO A  76      32.755  30.020  -2.837  1.00 20.59           C
ATOM    569  C   PRO A  76      31.256  29.719  -2.996  1.00 20.19           C
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ATOM    570  O   PRO A  76      30.432  30.251  -2.242  1.00 21.87           O
ATOM    571  CB  PRO A  76      33.276  30.991  -3.905  1.00 20.53           C
ATOM    572  CG  PRO A  76      33.899  30.062  -4.947  1.00 21.36           C
ATOM    573  CD  PRO A  76      34.640  29.098  -4.052  1.00 17.99           C
ATOM    574  N   ALA A  77      30.899  28.888  -3.971  1.00 19.86           N
ATOM    575  CA  ALA A  77      29.496  28.543  -4.182  1.00 20.50           C
ATOM    576  C   ALA A  77      28.877  27.832  -2.973  1.00 20.68           C
ATOM    577  O   ALA A  77      27.754  28.132  -2.586  1.00 22.16           O
ATOM    578  CB  ALA A  77      29.345  27.706  -5.410  1.00 17.32           C
ATOM    579  N   ASP A  78      29.609  26.895  -2.379  1.00 21.88           N
ATOM    580  CA  ASP A  78      29.116  26.169  -1.213  1.00 22.52           C
ATOM    581  C   ASP A  78      28.895  27.119  -0.043  1.00 21.68           C
ATOM    582  O   ASP A  78      27.948  26.960   0.718  1.00 22.49           O
ATOM    583  CB  ASP A  78      30.115  25.090  -0.779  1.00 22.77           C
ATOM    584  CG  ASP A  78      30.338  24.024  -1.840  1.00 27.96           C
ATOM    585  OD1 ASP A  78      29.621  24.010  -2.871  1.00 29.89           O
ATOM    586  OD2 ASP A  78      31.243  23.191  -1.638  1.00 31.95           O
ATOM    587  N   PHE A  79      29.775  28.109   0.091  1.00 22.83           N
ATOM    588  CA  PHE A  79      29.687  29.081   1.181  1.00 26.07           C
ATOM    589  C   PHE A  79      28.503  30.036   1.077  1.00 24.72           C
ATOM    590  O   PHE A  79      27.843  30.310   2.080  1.00 23.94           O
ATOM    591  CB  PHE A  79      30.992  29.865   1.328  1.00 27.33           C
ATOM    592  CG  PHE A  79      32.047  29.139   2.117  1.00 28.99           C
ATOM    593  CD1 PHE A  79      32.930  28.267   1.493  1.00 29.18           C
ATOM    594  CD2 PHE A  79      32.160  29.328   3.489  1.00 28.73           C
ATOM    595  CE1 PHE A  79      33.910  27.591   2.227  1.00 29.59           C
ATOM    596  CE2 PHE A  79      33.142  28.653   4.231  1.00 29.66           C
ATOM    597  CZ  PHE A  79      34.015  27.786   3.597  1.00 25.22           C
ATOM    598  N   ILE A  80      28.245  30.563  -0.118  1.00 19.51           N
ATOM    599  CA  ILE A  80      27.107  31.457  -0.286  1.00 17.67           C
ATOM    600  C   ILE A  80      25.796  30.662  -0.307  1.00 18.36           C
ATOM    601  O   ILE A  80      24.870  30.978   0.435  1.00 18.58           O
ATOM    602  CB  ILE A  80      27.234  32.378  -1.545  1.00 17.62           C
ATOM    603  CG1 ILE A  80      26.039  33.345  -1.601  1.00 16.59           C
ATOM    604  CG2 ILE A  80      27.341  31.544  -2.817  1.00 10.69           C
ATOM    605  CD1 ILE A  80      26.212  34.533  -2.530  1.00 15.24           C
ATOM    606  N   TYR A  81      25.744  29.581  -1.080  1.00 17.96           N
ATOM    607  CA  TYR A  81      24.528  28.785  -1.154  1.00 16.81           C
ATOM    608  C   TYR A  81      24.062  28.157   0.163  1.00 18.60           C
ATOM    609  O   TYR A  81      22.904  28.309   0.550  1.00 21.74           O
ATOM    610  CB  TYR A  81      24.645  27.700  -2.219  1.00 15.40           C
ATOM    611  CG  TYR A  81      23.453  26.777  -2.222  1.00 21.05           C
ATOM    612  CD1 TYR A  81      22.264  27.149  -2.849  1.00 20.46           C
ATOM    613  CD2 TYR A  81      23.497  25.541  -1.566  1.00 19.54           C
ATOM    614  CE1 TYR A  81      21.143  26.315  -2.825  1.00 21.23           C
ATOM    615  CE2 TYR A  81      22.382  24.698  -1.536  1.00 21.66           C
ATOM    616  CZ  TYR A  81      21.211  25.096  -2.169  1.00 22.93           C
ATOM    617  OH  TYR A  81      20.105  24.279  -2.152  1.00 27.15           O
ATOM    618  N   GLN A  82      24.948  27.449   0.850  1.00 18.03           N
ATOM    619  CA  GLN A  82      24.565  26.786   2.093  1.00 19.13           C
ATOM    620  C   GLN A  82      24.153  27.733   3.187  1.00 19.98           C
ATOM    621  O   GLN A  82      23.198  27.464   3.910  1.00 24.00           O
ATOM    622  CB  GLN A  82      25.670  25.854   2.586  1.00 20.98           C
ATOM    623  CG  GLN A  82      25.773  24.595   1.760  1.00 22.59           C
ATOM    624  CD  GLN A  82      26.929  23.721   2.158  1.00 24.30           C
ATOM    625  OE1 GLN A  82      27.604  23.143   1.308  1.00 28.72           O
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ATOM    626  NE2 GLN A  82      27.171  23.618   3.451  1.00 23.64           N
ATOM    627  N   ASN A  83      24.879  28.830   3.331  1.00 18.93           N
ATOM    628  CA  ASN A  83      24.532  29.783   4.359  1.00 20.46           C
ATOM    629  C   ASN A  83      23.205  30.466   4.046  1.00 21.81           C
ATOM    630  O   ASN A  83      22.395  30.682   4.950  1.00 22.83           O
ATOM    631  CB  ASN A  83      25.667  30.774   4.607  1.00 17.46           C
ATOM    632  CG  ASN A  83      26.818  30.143   5.396  1.00 26.97           C
ATOM    633  OD1 ASN A  83      26.646  29.731   6.541  1.00 28.76           O
ATOM    634  ND2 ASN A  83      27.987  30.035   4.770  1.00 27.76           N
ATOM    635  N   MET A  84      22.958  30.757   2.770  1.00 21.20           N
ATOM    636  CA  MET A  84      21.698  31.379   2.378  1.00 20.82           C
ATOM    637  C   MET A  84      20.521  30.440   2.672  1.00 21.23           C
ATOM    638  O   MET A  84      19.513  30.872   3.224  1.00 20.25           O
ATOM    639  CB  MET A  84      21.709  31.760   0.898  1.00 20.35           C
ATOM    640  CG  MET A  84      22.265  33.161   0.582  1.00 19.61           C
ATOM    641  SD  MET A  84      22.376  33.445  -1.236  1.00 25.63           S
ATOM    642  CE  MET A  84      20.657  33.569  -1.744  1.00 20.78           C
ATOM    643  N   MET A  85      20.658  29.156   2.338  1.00 19.67           N
ATOM    644  CA  MET A  85      19.580  28.189   2.583  1.00 22.63           C
ATOM    645  C   MET A  85      19.310  27.972   4.056  1.00 23.29           C
ATOM    646  O   MET A  85      18.158  27.999   4.476  1.00 24.37           O
ATOM    647  CB  MET A  85      19.869  26.836   1.931  1.00 24.77           C
ATOM    648  CG  MET A  85      19.660  26.830   0.433  1.00 31.83           C
ATOM    649  SD  MET A  85      17.946  27.126  -0.024  1.00 39.36           S
ATOM    650  CE  MET A  85      17.184  25.689   0.707  1.00 27.72           C
ATOM    651  N   ILE A  86      20.366  27.741   4.832  1.00 21.32           N
ATOM    652  CA  ILE A  86      20.224  27.522   6.271  1.00 22.10           C
ATOM    653  C   ILE A  86      19.510  28.701   6.933  1.00 23.88           C
ATOM    654  O   ILE A  86      18.578  28.509   7.709  1.00 24.74           O
ATOM    655  CB  ILE A  86      21.594  27.300   6.946  1.00 21.35           C
ATOM    656  CG1 ILE A  86      22.232  26.012   6.433  1.00 19.79           C
ATOM    657  CG2 ILE A  86      21.446  27.241   8.462  1.00 20.61           C
ATOM    658  CD1 ILE A  86      23.653  25.809   6.957  1.00 23.69           C
ATOM    659  N   GLU A  87      19.937  29.920   6.612  1.00 23.12           N
ATOM    660  CA  GLU A  87      19.318  31.125   7.164  1.00 25.34           C
ATOM    661  C   GLU A  87      17.842  31.214   6.795  1.00 24.41           C
ATOM    662  O   GLU A  87      16.994  31.348   7.673  1.00 26.08           O
ATOM    663  CB  GLU A  87      20.034  32.373   6.650  1.00 25.52           C
ATOM    664  CG  GLU A  87      21.360  32.630   7.320  1.00 28.43           C
ATOM    665  CD  GLU A  87      22.257  33.544   6.504  1.00 27.90           C
ATOM    666  OE1 GLU A  87      21.751  34.213   5.565  1.00 22.10           O
ATOM    667  OE2 GLU A  87      23.478  33.556   6.794  1.00 27.69           O
ATOM    668  N   SER A  88      17.561  31.149   5.490  1.00 24.56           N
ATOM    669  CA  SER A  88      16.209  31.213   4.930  1.00 24.58           C
ATOM    670  C   SER A  88      15.280  30.186   5.536  1.00 26.05           C
ATOM    671  O   SER A  88      14.187  30.524   5.979  1.00 26.30           O
ATOM    672  CB  SER A  88      16.250  30.988   3.418  1.00 24.78           C
ATOM    673  OG  SER A  88      16.962  32.027   2.788  1.00 31.47           O
ATOM    674  N   ASN A  89      15.717  28.929   5.539  1.00 24.50           N
ATOM    675  CA  ASN A  89      14.922  27.833   6.084  1.00 26.71           C
ATOM    676  C   ASN A  89      14.546  28.046   7.547  1.00 27.04           C
ATOM    677  O   ASN A  89      13.375  27.962   7.904  1.00 27.03           O
ATOM    678  CB  ASN A  89      15.663  26.498   5.941  1.00 19.99           C
ATOM    679  CG  ASN A  89      15.729  26.009   4.511  1.00 22.24           C
ATOM    680  OD1 ASN A  89      16.512  25.117   4.195  1.00 27.99           O
ATOM    681  ND2 ASN A  89      14.894  26.563   3.646  1.00 20.02           N
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ATOM    682  N   ILE A  90      15.537  28.336   8.386  1.00 27.67           N
ATOM    683  CA  ILE A  90      15.285  28.543   9.812  1.00 27.15           C
ATOM    684  C   ILE A  90      14.414  29.761  10.103  1.00 25.83           C
ATOM    685  O   ILE A  90      13.410  29.657  10.809  1.00 28.80           O
ATOM    686  CB  ILE A  90      16.614  28.615  10.632  1.00 24.87           C
ATOM    687  CG1 ILE A  90      17.270  27.235  10.659  1.00 25.41           C
ATOM    688  CG2 ILE A  90      16.354  29.091  12.062  1.00 21.02           C
ATOM    689  CD1 ILE A  90      18.511  27.166  11.490  1.00 26.66           C
ATOM    690  N   ILE A  91      14.784  30.907   9.546  1.00 25.29           N
ATOM    691  CA  ILE A  91      14.034  32.131   9.780  1.00 24.17           C
ATOM    692  C   ILE A  91      12.586  32.060   9.307  1.00 23.51           C
ATOM    693  O   ILE A  91      11.672  32.466  10.028  1.00 24.39           O
ATOM    694  CB  ILE A  91      14.771  33.348   9.176  1.00 22.16           C
ATOM    695  CG1 ILE A  91      16.050  33.611   9.975  1.00 16.91           C
ATOM    696  CG2 ILE A  91      13.880  34.580   9.184  1.00 24.10           C
ATOM    697  CD1 ILE A  91      16.980  34.617   9.360  1.00 17.53           C
ATOM    698  N   HIS A  92      12.363  31.525   8.116  1.00 22.94           N
ATOM    699  CA  HIS A  92      11.007  31.434   7.609  1.00 22.11           C
ATOM    700  C   HIS A  92      10.198  30.376   8.358  1.00 25.59           C
ATOM    701  O   HIS A  92       9.039  30.613   8.693  1.00 26.57           O
ATOM    702  CB  HIS A  92      10.998  31.157   6.115  1.00 18.75           C
ATOM    703  CG  HIS A  92       9.648  31.304   5.487  1.00 23.25           C
ATOM    704  ND1 HIS A  92       9.011  30.268   4.839  1.00 24.14           N
ATOM    705  CD2 HIS A  92       8.817  32.368   5.401  1.00 19.46           C
ATOM    706  CE1 HIS A  92       7.848  30.690   4.377  1.00 22.47           C
ATOM    707  NE2 HIS A  92       7.707  31.959   4.706  1.00 25.02           N
ATOM    708  N   ALA A  93      10.803  29.218   8.629  1.00 25.00           N
ATOM    709  CA  ALA A  93      10.107  28.156   9.363  1.00 24.44           C
ATOM    710  C   ALA A  93       9.740  28.640  10.754  1.00 25.17           C
ATOM    711  O   ALA A  93       8.635  28.388  11.226  1.00 29.28           O
ATOM    712  CB  ALA A  93      10.964  26.910   9.463  1.00 22.12           C
ATOM    713  N   ALA A  94      10.665  29.341  11.405  1.00 24.20           N
ATOM    714  CA  ALA A  94      10.425  29.872  12.740  1.00 23.89           C
ATOM    715  C   ALA A  94       9.170  30.747  12.717  1.00 27.51           C
ATOM    716  O   ALA A  94       8.241  30.536  13.490  1.00 30.52           O
ATOM    717  CB  ALA A  94      11.630  30.674  13.211  1.00 18.65           C
ATOM    718  N   HIS A  95       9.124  31.689  11.782  1.00 27.72           N
ATOM    719  CA  HIS A  95       7.979  32.584  11.653  1.00 27.48           C
ATOM    720  C   HIS A  95       6.676  31.838  11.377  1.00 24.17           C
ATOM    721  O   HIS A  95       5.648  32.163  11.953  1.00 26.36           O
ATOM    722  CB  HIS A  95       8.210  33.614  10.545  1.00 22.08           C
ATOM    723  CG  HIS A  95       6.980  34.393  10.203  1.00 25.88           C
ATOM    724  ND1 HIS A  95       6.263  34.178   9.044  1.00 27.08           N
ATOM    725  CD2 HIS A  95       6.287  35.318  10.909  1.00 20.90           C
ATOM    726  CE1 HIS A  95       5.178  34.933   9.055  1.00 23.25           C
ATOM    727  NE2 HIS A  95       5.170  35.634  10.176  1.00 24.87           N
ATOM    728  N   GLN A  96       6.725  30.896  10.438  1.00 24.84           N
ATOM    729  CA  GLN A  96       5.578  30.077  10.051  1.00 28.43           C
ATOM    730  C   GLN A  96       4.998  29.286  11.222  1.00 28.91           C
ATOM    731  O   GLN A  96       3.828  28.909  11.195  1.00 30.39           O
ATOM    732  CB  GLN A  96       5.997  29.060   8.999  1.00 29.94           C
ATOM    733  CG  GLN A  96       6.382  29.636   7.689  1.00 40.30           C
ATOM    734  CD  GLN A  96       5.190  29.950   6.841  1.00 47.03           C
ATOM    735  OE1 GLN A  96       4.591  31.019   6.973  1.00 50.29           O
ATOM    736  NE2 GLN A  96       4.830  29.020   5.952  1.00 48.01           N
ATOM    737  N   ASN A  97       5.837  28.986  12.211  1.00 28.24           N
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ATOM    738  CA  ASN A  97       5.419  28.217  13.376  1.00 27.91           C
ATOM    739  C   ASN A  97       5.374  29.031  14.661  1.00 29.77           C
ATOM    740  O   ASN A  97       5.495  28.500  15.765  1.00 32.39           O
ATOM    741  CB  ASN A  97       6.286  26.972  13.522  1.00 23.46           C
ATOM    742  CG  ASN A  97       6.030  25.970  12.414  1.00 32.45           C
ATOM    743  OD1 ASN A  97       6.692  25.982  11.370  1.00 35.48           O
ATOM    744  ND2 ASN A  97       5.035  25.115  12.616  1.00 31.80           N
ATOM    745  N   ASP A  98       5.212  30.337  14.502  1.00 31.63           N
ATOM    746  CA  ASP A  98       5.094  31.247  15.620  1.00 35.66           C
ATOM    747  C   ASP A  98       6.211  31.430  16.624  1.00 36.34           C
ATOM    748  O   ASP A  98       5.945  31.787  17.780  1.00 39.08           O
ATOM    749  CB  ASP A  98       3.785  31.001  16.350  1.00 46.22           C
ATOM    750  CG  ASP A  98       2.633  31.695  15.686  1.00 53.60           C
ATOM    751  OD1 ASP A  98       2.659  32.946  15.643  1.00 57.85           O
ATOM    752  OD2 ASP A  98       1.724  30.993  15.189  1.00 61.27           O
ATOM    753  N   VAL A  99       7.451  31.186  16.209  1.00 33.10           N
ATOM    754  CA  VAL A  99       8.582  31.426  17.095  1.00 28.72           C
ATOM    755  C   VAL A  99       8.823  32.919  16.894  1.00 27.70           C
ATOM    756  O   VAL A  99       9.099  33.365  15.777  1.00 31.03           O
ATOM    757  CB  VAL A  99       9.815  30.637  16.672  1.00 29.82           C
ATOM    758  CG1 VAL A  99      10.914  30.797  17.715  1.00 27.68           C
ATOM    759  CG2 VAL A  99       9.451  29.175  16.486  1.00 30.52           C
ATOM    760  N   ASN A 100       8.689  33.694  17.963  1.00 24.37           N
ATOM    761  CA  ASN A 100       8.826  35.142  17.870  1.00 24.60           C
ATOM    762  C   ASN A 100      10.223  35.674  18.177  1.00 25.47           C
ATOM    763  O   ASN A 100      10.568  36.793  17.782  1.00 24.55           O
ATOM    764  CB  ASN A 100       7.801  35.791  18.812  1.00 23.88           C
ATOM    765  CG  ASN A 100       7.503  37.230  18.459  1.00 22.91           C
ATOM    766  OD1 ASN A 100       6.960  37.509  17.399  1.00 28.84           O
ATOM    767  ND2 ASN A 100       7.841  38.153  19.356  1.00 23.06           N
ATOM    768  N   LYS A 101      11.010  34.871  18.889  1.00 23.95           N
ATOM    769  CA  LYS A 101      12.359  35.253  19.302  1.00 27.07           C
ATOM    770  C   LYS A 101      13.451  34.457  18.597  1.00 24.02           C
ATOM    771  O   LYS A 101      13.449  33.226  18.598  1.00 24.56           O
ATOM    772  CB  LYS A 101      12.515  35.076  20.813  1.00 27.80           C
ATOM    773  CG  LYS A 101      12.106  36.262  21.669  1.00 26.11           C
ATOM    774  CD  LYS A 101      12.717  36.090  23.049  1.00 27.30           C
ATOM    775  CE  LYS A 101      13.105  37.404  23.676  1.00 27.30           C
ATOM    776  NZ  LYS A 101      13.975  38.195  22.787  1.00 30.59           N
ATOM    777  N   LEU A 102      14.418  35.170  18.042  1.00 22.42           N
ATOM    778  CA  LEU A 102      15.505  34.524  17.326  1.00 22.94           C
ATOM    779  C   LEU A 102      16.749  35.389  17.376  1.00 22.29           C
ATOM    780  O   LEU A 102      16.661  36.615  17.396  1.00 21.59           O
ATOM    781  CB  LEU A 102      15.084  34.257  15.871  1.00 22.13           C
ATOM    782  CG  LEU A 102      16.042  33.568  14.903  1.00 23.29           C
ATOM    783  CD1 LEU A 102      15.253  32.759  13.887  1.00 21.49           C
ATOM    784  CD2 LEU A 102      16.937  34.592  14.213  1.00 17.05           C
ATOM    785  N   LEU A 103      17.902  34.743  17.506  1.00 20.92           N
ATOM    786  CA  LEU A 103      19.161  35.464  17.522  1.00 20.49           C
ATOM    787  C   LEU A 103      20.030  34.926  16.385  1.00 22.83           C
ATOM    788  O   LEU A 103      20.317  33.725  16.319  1.00 22.93           O
ATOM    789  CB  LEU A 103      19.891  35.303  18.849  1.00 20.99           C
ATOM    790  CG  LEU A 103      21.138  36.189  18.856  1.00 21.16           C
ATOM    791  CD1 LEU A 103      20.746  37.645  19.108  1.00 21.12           C
ATOM    792  CD2 LEU A 103      22.093  35.710  19.902  1.00 21.92           C
ATOM    793  N   PHE A 104      20.385  35.815  15.461  1.00 21.20           N
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ATOM    794  CA  PHE A 104      21.210  35.472  14.321  1.00 21.41           C
ATOM    795  C   PHE A 104      22.655  35.897  14.582  1.00 22.87           C
ATOM    796  O   PHE A 104      22.915  37.024  14.992  1.00 22.66           O
ATOM    797  CB  PHE A 104      20.664  36.171  13.076  1.00 21.21           C
ATOM    798  CG  PHE A 104      21.493  35.955  11.847  1.00 22.56           C
ATOM    799  CD1 PHE A 104      21.579  34.694  11.264  1.00 27.99           C
ATOM    800  CD2 PHE A 104      22.208  37.005  11.281  1.00 23.00           C
ATOM    801  CE1 PHE A 104      22.367  34.480  10.134  1.00 27.95           C
ATOM    802  CE2 PHE A 104      23.000  36.803  10.147  1.00 23.13           C
ATOM    803  CZ  PHE A 104      23.079  35.538   9.576  1.00 22.43           C
ATOM    804  N   LEU A 105      23.580  34.967  14.369  1.00 27.02           N
ATOM    805  CA  LEU A 105      25.005  35.210  14.554  1.00 26.46           C
ATOM    806  C   LEU A 105      25.691  35.495  13.243  1.00 27.35           C
ATOM    807  O   LEU A 105      25.806  34.613  12.392  1.00 31.87           O
ATOM    808  CB  LEU A 105      25.661  34.001  15.187  1.00 27.56           C
ATOM    809  CG  LEU A 105      25.054  33.730  16.552  1.00 35.36           C
ATOM    810  CD1 LEU A 105      25.632  32.479  17.123  1.00 44.91           C
ATOM    811  CD2 LEU A 105      25.350  34.877  17.466  1.00 39.41           C
ATOM    812  N   GLY A 106      26.127  36.741  13.079  1.00 27.28           N
ATOM    813  CA  GLY A 106      26.823  37.131  11.872  1.00 31.26           C
ATOM    814  C   GLY A 106      28.321  37.003  12.067  1.00 33.60           C
ATOM    815  O   GLY A 106      28.785  36.126  12.786  1.00 30.81           O
ATOM    816  N   SER A 107      29.070  37.957  11.502  1.00 34.95           N
ATOM    817  CA  SER A 107      30.528  37.956  11.588  1.00 36.53           C
ATOM    818  C   SER A 107      31.070  39.355  11.258  1.00 38.53           C
ATOM    819  O   SER A 107      30.340  40.196  10.723  1.00 40.91           O
ATOM    820  CB  SER A 107      31.073  36.923  10.596  1.00 35.42           C
ATOM    821  OG  SER A 107      32.476  36.857  10.672  1.00 45.62           O
ATOM    822  N   SER A 108      32.333  39.629  11.584  1.00 42.40           N
ATOM    823  CA  SER A 108      32.891  40.948  11.285  1.00 44.62           C
ATOM    824  C   SER A 108      33.446  41.059   9.853  1.00 46.28           C
ATOM    825  O   SER A 108      33.782  42.156   9.403  1.00 47.82           O
ATOM    826  CB  SER A 108      33.955  41.336  12.302  1.00 42.96           C
ATOM    827  OG  SER A 108      35.060  40.462  12.224  1.00 53.15           O
ATOM    828  N   CYS A 109      33.570  39.915   9.167  1.00 47.52           N
ATOM    829  CA  CYS A 109      34.061  39.849   7.774  1.00 46.68           C
ATOM    830  C   CYS A 109      33.098  40.589   6.861  1.00 40.25           C
ATOM    831  O   CYS A 109      33.403  40.895   5.717  1.00 45.71           O
ATOM    832  CB  CYS A 109      34.102  38.394   7.291  1.00 50.89           C
ATOM    833  SG  CYS A 109      34.994  37.277   8.352  1.00 63.99           S
ATOM    834  N   ILE A 110      31.909  40.811   7.389  1.00 33.46           N
ATOM    835  CA  ILE A 110      30.802  41.470   6.735  1.00 30.96           C
ATOM    836  C   ILE A 110      31.022  42.963   6.455  1.00 24.83           C
ATOM    837  O   ILE A 110      30.354  43.539   5.604  1.00 24.03           O
ATOM    838  CB  ILE A 110      29.580  41.339   7.650  1.00 37.96           C
ATOM    839  CG1 ILE A 110      29.074  39.910   7.674  1.00 41.06           C
ATOM    840  CG2 ILE A 110      28.474  42.197   7.200  1.00 47.10           C
ATOM    841  CD1 ILE A 110      27.773  39.813   8.439  1.00 39.37           C
ATOM    842  N   TYR A 111      31.907  43.606   7.199  1.00 21.51           N
ATOM    843  CA  TYR A 111      32.148  45.028   6.997  1.00 19.87           C
ATOM    844  C   TYR A 111      33.024  45.323   5.797  1.00 21.44           C
ATOM    845  O   TYR A 111      33.822  44.484   5.386  1.00 21.93           O
ATOM    846  CB  TYR A 111      32.721  45.637   8.265  1.00 15.73           C
ATOM    847  CG  TYR A 111      31.682  45.768   9.343  1.00 19.46           C
ATOM    848  CD1 TYR A 111      30.616  46.664   9.202  1.00 22.42           C
ATOM    849  CD2 TYR A 111      31.748  45.008  10.502  1.00 20.39           C
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ATOM    850  CE1 TYR A 111      29.640  46.801  10.207  1.00 23.66           C
ATOM    851  CE2 TYR A 111      30.775  45.136  11.521  1.00 22.33           C
ATOM    852  CZ  TYR A 111      29.734  46.033  11.363  1.00 22.58           C
ATOM    853  OH  TYR A 111      28.799  46.193  12.351  1.00 23.00           O
ATOM    854  N   PRO A 112      32.876  46.522   5.201  1.00 24.37           N
ATOM    855  CA  PRO A 112      33.684  46.896   4.033  1.00 23.67           C
ATOM    856  C   PRO A 112      35.163  46.765   4.336  1.00 26.68           C
ATOM    857  O   PRO A 112      35.582  46.976   5.471  1.00 26.55           O
ATOM    858  CB  PRO A 112      33.304  48.347   3.810  1.00 21.26           C
ATOM    859  CG  PRO A 112      31.900  48.412   4.327  1.00 25.32           C
ATOM    860  CD  PRO A 112      31.984  47.627   5.593  1.00 23.89           C
ATOM    861  N   LYS A 113      35.939  46.390   3.326  1.00 30.77           N
ATOM    862  CA  LYS A 113      37.380  46.217   3.456  1.00 35.37           C
ATOM    863  C   LYS A 113      38.064  47.480   3.992  1.00 37.13           C
ATOM    864  O   LYS A 113      38.904  47.413   4.891  1.00 37.75           O
ATOM    865  CB  LYS A 113      37.988  45.850   2.095  1.00 38.10           C
ATOM    866  CG  LYS A 113      39.457  45.537   2.185  1.00 47.96           C
ATOM    867  CD  LYS A 113      40.163  45.471   0.837  1.00 54.91           C
ATOM    868  CE  LYS A 113      41.654  45.159   1.069  1.00 57.16           C
ATOM    869  NZ  LYS A 113      42.480  45.146  -0.168  1.00 59.65           N
ATOM    870  N   LEU A 114      37.687  48.632   3.443  1.00 37.67           N
ATOM    871  CA  LEU A 114      38.276  49.907   3.840  1.00 38.34           C
ATOM    872  C   LEU A 114      37.419  50.753   4.765  1.00 35.97           C
ATOM    873  O   LEU A 114      37.400  51.976   4.665  1.00 38.75           O
ATOM    874  CB  LEU A 114      38.661  50.713   2.600  1.00 40.92           C
ATOM    875  CG  LEU A 114      39.726  50.012   1.752  1.00 47.70           C
ATOM    876  CD1 LEU A 114      39.984  50.807   0.494  1.00 48.67           C
ATOM    877  CD2 LEU A 114      41.015  49.826   2.553  1.00 43.63           C
ATOM    878  N   ALA A 115      36.733  50.094   5.687  1.00 33.48           N
ATOM    879  CA  ALA A 115      35.883  50.778   6.641  1.00 31.82           C
ATOM    880  C   ALA A 115      36.681  51.667   7.610  1.00 34.15           C
ATOM    881  O   ALA A 115      37.890  51.511   7.781  1.00 33.21           O
ATOM    882  CB  ALA A 115      35.067  49.758   7.411  1.00 29.41           C
ATOM    883  N   LYS A 116      35.982  52.618   8.218  1.00 35.78           N
ATOM    884  CA  LYS A 116      36.545  53.550   9.186  1.00 37.45           C
ATOM    885  C   LYS A 116      36.690  52.777  10.496  1.00 35.17           C
ATOM    886  O   LYS A 116      35.780  52.048  10.878  1.00 35.30           O
ATOM    887  CB  LYS A 116      35.563  54.715   9.368  1.00 43.53           C
ATOM    888  CG  LYS A 116      35.918  55.725  10.444  1.00 55.24           C
ATOM    889  CD  LYS A 116      34.669  56.521  10.852  1.00 65.20           C
ATOM    890  CE  LYS A 116      34.964  57.598  11.906  1.00 70.45           C
ATOM    891  NZ  LYS A 116      35.683  58.788  11.341  1.00 74.67           N
ATOM    892  N   GLN A 117      37.828  52.941  11.173  1.00 33.24           N
ATOM    893  CA  GLN A 117      38.119  52.253  12.437  1.00 29.05           C
ATOM    894  C   GLN A 117      38.038  53.191  13.651  1.00 29.84           C
ATOM    895  O   GLN A 117      38.531  54.319  13.599  1.00 33.51           O
ATOM    896  CB  GLN A 117      39.523  51.654  12.375  1.00 26.38           C
ATOM    897  CG  GLN A 117      39.774  50.783  11.162  1.00 21.48           C
ATOM    898  CD  GLN A 117      38.957  49.528  11.192  1.00 21.99           C
ATOM    899  OE1 GLN A 117      38.688  48.982  12.259  1.00 23.73           O
ATOM    900  NE2 GLN A 117      38.543  49.058  10.021  1.00 20.64           N
ATOM    901  N   PRO A 118      37.395  52.746  14.752  1.00 28.79           N
ATOM    902  CA  PRO A 118      36.750  51.437  14.913  1.00 29.49           C
ATOM    903  C   PRO A 118      35.438  51.394  14.122  1.00 28.67           C
ATOM    904  O   PRO A 118      34.816  52.428  13.897  1.00 25.90           O
ATOM    905  CB  PRO A 118      36.536  51.343  16.428  1.00 29.90           C
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ATOM    906  CG  PRO A 118      36.353  52.762  16.835  1.00 27.40           C
ATOM    907  CD  PRO A 118      37.394  53.492  16.024  1.00 26.78           C
ATOM    908  N   MET A 119      35.034  50.204  13.689  1.00 27.06           N
ATOM    909  CA  MET A 119      33.830  50.044  12.876  1.00 23.35           C
ATOM    910  C   MET A 119      32.494  50.028  13.599  1.00 25.01           C
ATOM    911  O   MET A 119      32.155  49.050  14.275  1.00 26.90           O
ATOM    912  CB  MET A 119      33.949  48.783  12.027  1.00 22.03           C
ATOM    913  CG  MET A 119      35.200  48.751  11.193  1.00 24.48           C
ATOM    914  SD  MET A 119      35.313  47.284  10.165  1.00 27.80           S
ATOM    915  CE  MET A 119      35.497  46.006  11.385  1.00 23.88           C
ATOM    916  N   ALA A 120      31.718  51.097  13.426  1.00 21.76           N
ATOM    917  CA  ALA A 120      30.394  51.185  14.034  1.00 22.10           C
ATOM    918  C   ALA A 120      29.443  50.350  13.173  1.00 21.64           C
ATOM    919  O   ALA A 120      29.767  50.014  12.032  1.00 21.40           O
ATOM    920  CB  ALA A 120      29.925  52.642  14.093  1.00 18.47           C
ATOM    921  N   GLU A 121      28.279  50.018  13.718  1.00 20.92           N
ATOM    922  CA  GLU A 121      27.299  49.220  13.001  1.00 18.01           C
ATOM    923  C   GLU A 121      26.839  49.831  11.687  1.00 19.69           C
ATOM    924  O   GLU A 121      26.426  49.110  10.773  1.00 21.41           O
ATOM    925  CB  GLU A 121      26.080  48.945  13.883  1.00 17.96           C
ATOM    926  CG  GLU A 121      26.298  47.895  14.977  1.00 20.61           C
ATOM    927  CD  GLU A 121      26.874  48.449  16.275  1.00 22.89           C
ATOM    928  OE1 GLU A 121      27.299  49.625  16.329  1.00 22.25           O
ATOM    929  OE2 GLU A 121      26.901  47.688  17.260  1.00 24.40           O
ATOM    930  N   SER A 122      26.915  51.155  11.592  1.00 20.11           N
ATOM    931  CA  SER A 122      26.493  51.878  10.392  1.00 22.28           C
ATOM    932  C   SER A 122      27.500  51.788   9.260  1.00 22.91           C
ATOM    933  O   SER A 122      27.328  52.397   8.208  1.00 24.86           O
ATOM    934  CB  SER A 122      26.240  53.343  10.726  1.00 23.94           C
ATOM    935  OG  SER A 122      27.385  53.910  11.332  1.00 30.21           O
ATOM    936  N   GLU A 123      28.554  51.020   9.484  1.00 24.60           N
ATOM    937  CA  GLU A 123      29.585  50.836   8.485  1.00 22.15           C
ATOM    938  C   GLU A 123      29.151  49.742   7.511  1.00 22.50           C
ATOM    939  O   GLU A 123      29.756  49.550   6.451  1.00 19.26           O
ATOM    940  CB  GLU A 123      30.882  50.453   9.177  1.00 26.62           C
ATOM    941  CG  GLU A 123      32.097  50.987   8.495  1.00 35.54           C
ATOM    942  CD  GLU A 123      32.087  52.492   8.406  1.00 34.99           C
ATOM    943  OE1 GLU A 123      31.872  53.139   9.448  1.00 40.58           O
ATOM    944  OE2 GLU A 123      32.297  53.022   7.296  1.00 39.01           O
ATOM    945  N   LEU A 124      28.077  49.049   7.873  1.00 21.19           N
ATOM    946  CA  LEU A 124      27.536  47.983   7.054  1.00 23.41           C
ATOM    947  C   LEU A 124      27.100  48.494   5.686  1.00 25.20           C
ATOM    948  O   LEU A 124      26.362  49.475   5.599  1.00 24.30           O
ATOM    949  CB  LEU A 124      26.331  47.358   7.745  1.00 24.10           C
ATOM    950  CG  LEU A 124      25.832  46.095   7.046  1.00 25.22           C
ATOM    951  CD1 LEU A 124      26.881  45.027   7.209  1.00 25.53           C
ATOM    952  CD2 LEU A 124      24.517  45.628   7.624  1.00 29.44           C
ATOM    953  N   LEU A 125      27.548  47.808   4.633  1.00 26.15           N
ATOM    954  CA  LEU A 125      27.211  48.135   3.244  1.00 28.68           C
ATOM    955  C   LEU A 125      27.720  49.492   2.745  1.00 30.78           C
ATOM    956  O   LEU A 125      27.227  50.011   1.747  1.00 34.18           O
ATOM    957  CB  LEU A 125      25.685  48.018   3.014  1.00 22.71           C
ATOM    958  CG  LEU A 125      25.020  46.631   3.070  1.00 22.18           C
ATOM    959  CD1 LEU A 125      23.526  46.765   3.042  1.00 23.90           C
ATOM    960  CD2 LEU A 125      25.461  45.786   1.907  1.00 23.47           C
ATOM    961  N   GLN A 126      28.727  50.045   3.412  1.00 32.52           N
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ATOM    962  CA  GLN A 126      29.291  51.343   3.038  1.00 32.04           C
ATOM    963  C   GLN A 126      30.438  51.292   2.036  1.00 34.53           C
ATOM    964  O   GLN A 126      31.033  52.328   1.721  1.00 41.82           O
ATOM    965  CB  GLN A 126      29.784  52.068   4.282  1.00 34.20           C
ATOM    966  CG  GLN A 126      28.689  52.490   5.215  1.00 42.11           C
ATOM    967  CD  GLN A 126      27.907  53.669   4.694  1.00 48.00           C
ATOM    968  OE1 GLN A 126      27.727  53.833   3.482  1.00 50.23           O
ATOM    969  NE2 GLN A 126      27.437  54.510   5.611  1.00 51.07           N
ATOM    970  N   GLY A 127      30.769  50.100   1.551  1.00 31.66           N
ATOM    971  CA  GLY A 127      31.858  49.968   0.602  1.00 27.82           C
ATOM    972  C   GLY A 127      32.084  48.518   0.236  1.00 29.49           C
ATOM    973  O   GLY A 127      31.483  47.611   0.825  1.00 28.78           O
ATOM    974  N   THR A 128      32.974  48.298  -0.725  1.00 30.11           N
ATOM    975  CA  THR A 128      33.274  46.959  -1.199  1.00 31.04           C
ATOM    976  C   THR A 128      33.841  46.029  -0.125  1.00 28.22           C
ATOM    977  O   THR A 128      34.551  46.454   0.788  1.00 28.82           O
ATOM    978  CB  THR A 128      34.217  46.988  -2.434  1.00 32.55           C
ATOM    979  OG1 THR A 128      35.514  47.442  -2.047  1.00 34.97           O
ATOM    980  CG2 THR A 128      33.665  47.924  -3.499  1.00 32.02           C
ATOM    981  N   LEU A 129      33.493  44.754  -0.253  1.00 26.30           N
ATOM    982  CA  LEU A 129      33.923  43.709   0.661  1.00 25.84           C
ATOM    983  C   LEU A 129      35.295  43.145   0.282  1.00 25.86           C
ATOM    984  O   LEU A 129      35.799  43.378  -0.821  1.00 26.17           O
ATOM    985  CB  LEU A 129      32.891  42.573   0.646  1.00 23.20           C
ATOM    986  CG  LEU A 129      31.472  42.951   1.090  1.00 27.30           C
ATOM    987  CD1 LEU A 129      30.458  41.912   0.641  1.00 21.96           C
ATOM    988  CD2 LEU A 129      31.444  43.139   2.595  1.00 20.40           C
ATOM    989  N   GLU A 130      35.909  42.444   1.232  1.00 26.75           N
ATOM    990  CA  GLU A 130      37.190  41.774   1.038  1.00 25.02           C
ATOM    991  C   GLU A 130      36.862  40.627   0.051  1.00 25.78           C
ATOM    992  O   GLU A 130      35.910  39.857   0.274  1.00 24.31           O
ATOM    993  CB  GLU A 130      37.659  41.252   2.405  1.00 31.54           C
ATOM    994  CG  GLU A 130      38.783  40.238   2.396  1.00 44.22           C
ATOM    995  CD  GLU A 130      40.038  40.742   1.707  1.00 52.18           C
ATOM    996  OE1 GLU A 130      40.549  41.817   2.113  1.00 55.29           O
ATOM    997  OE2 GLU A 130      40.510  40.051   0.766  1.00 50.94           O
ATOM    998  N   PRO A 131      37.585  40.548  -1.089  1.00 26.32           N
ATOM    999  CA  PRO A 131      37.340  39.499  -2.090  1.00 24.15           C
ATOM   1000  C   PRO A 131      37.237  38.091  -1.513  1.00 26.36           C
ATOM   1001  O   PRO A 131      36.285  37.361  -1.810  1.00 27.56           O
ATOM   1002  CB  PRO A 131      38.533  39.641  -3.017  1.00 22.30           C
ATOM   1003  CG  PRO A 131      38.791  41.113  -2.984  1.00 23.95           C
ATOM   1004  CD  PRO A 131      38.695  41.421  -1.518  1.00 24.80           C
ATOM   1005  N   THR A 132      38.199  37.726  -0.668  1.00 25.01           N
ATOM   1006  CA  THR A 132      38.234  36.409  -0.033  1.00 25.33           C
ATOM   1007  C   THR A 132      36.935  36.026   0.667  1.00 27.61           C
ATOM   1008  O   THR A 132      36.471  34.891   0.547  1.00 27.87           O
ATOM   1009  CB  THR A 132      39.358  36.327   1.002  1.00 27.29           C
ATOM   1010  OG1 THR A 132      40.617  36.466   0.333  1.00 32.89           O
ATOM   1011  CG2 THR A 132      39.306  34.985   1.765  1.00 27.23           C
ATOM   1012  N   ASN A 133      36.334  36.990   1.355  1.00 26.82           N
ATOM   1013  CA  ASN A 133      35.110  36.746   2.104  1.00 28.00           C
ATOM   1014  C   ASN A 133      33.809  37.145   1.446  1.00 25.12           C
ATOM   1015  O   ASN A 133      32.748  36.896   2.008  1.00 20.90           O
ATOM   1016  CB  ASN A 133      35.214  37.445   3.450  1.00 31.32           C
ATOM   1017  CG  ASN A 133      36.380  36.946   4.245  1.00 41.55           C
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ATOM   1018  OD1 ASN A 133      36.488  35.742   4.521  1.00 45.01           O
ATOM   1019  ND2 ASN A 133      37.306  37.846   4.566  1.00 41.35           N
ATOM   1020  N   GLU A 134      33.883  37.708   0.243  1.00 22.38           N
ATOM   1021  CA  GLU A 134      32.691  38.180  -0.431  1.00 20.17           C
ATOM   1022  C   GLU A 134      31.431  37.309  -0.444  1.00 22.01           C
ATOM   1023  O   GLU A 134      30.385  37.768  -0.019  1.00 24.68           O
ATOM   1024  CB  GLU A 134      33.014  38.679  -1.830  1.00 21.19           C
ATOM   1025  CG  GLU A 134      31.805  39.295  -2.475  1.00 24.77           C
ATOM   1026  CD  GLU A 134      32.133  40.054  -3.723  1.00 23.81           C
ATOM   1027  OE1 GLU A 134      32.513  41.236  -3.608  1.00 27.23           O
ATOM   1028  OE2 GLU A 134      31.997  39.475  -4.816  1.00 24.18           O
ATOM   1029  N   PRO A 135      31.511  36.049  -0.911  1.00 23.71           N
ATOM   1030  CA  PRO A 135      30.312  35.190  -0.940  1.00 23.73           C
ATOM   1031  C   PRO A 135      29.717  34.918   0.456  1.00 22.29           C
ATOM   1032  O   PRO A 135      28.496  34.967   0.648  1.00 21.71           O
ATOM   1033  CB  PRO A 135      30.826  33.896  -1.596  1.00 23.02           C
ATOM   1034  CG  PRO A 135      31.985  34.351  -2.415  1.00 21.18           C
ATOM   1035  CD  PRO A 135      32.666  35.346  -1.498  1.00 22.81           C
ATOM   1036  N   TYR A 136      30.587  34.621   1.415  1.00 20.02           N
ATOM   1037  CA  TYR A 136      30.178  34.362   2.795  1.00 21.54           C
ATOM   1038  C   TYR A 136      29.524  35.621   3.374  1.00 20.75           C
ATOM   1039  O   TYR A 136      28.447  35.562   3.978  1.00 20.25           O
ATOM   1040  CB  TYR A 136      31.414  33.974   3.623  1.00 19.73           C
ATOM   1041  CG  TYR A 136      31.181  33.754   5.108  1.00 25.49           C
ATOM   1042  CD1 TYR A 136      30.435  32.664   5.574  1.00 28.50           C
ATOM   1043  CD2 TYR A 136      31.743  34.616   6.058  1.00 25.98           C
ATOM   1044  CE1 TYR A 136      30.253  32.438   6.959  1.00 29.72           C
ATOM   1045  CE2 TYR A 136      31.570  34.399   7.431  1.00 29.71           C
ATOM   1046  CZ  TYR A 136      30.822  33.309   7.878  1.00 29.68           C
ATOM   1047  OH  TYR A 136      30.623  33.111   9.242  1.00 38.88           O
ATOM   1048  N   ALA A 137      30.180  36.756   3.157  1.00 17.79           N
ATOM   1049  CA  ALA A 137      29.708  38.049   3.637  1.00 18.54           C
ATOM   1050  C   ALA A 137      28.317  38.403   3.099  1.00 19.27           C
ATOM   1051  O   ALA A 137      27.456  38.865   3.852  1.00 19.80           O
ATOM   1052  CB  ALA A 137      30.717  39.144   3.269  1.00 19.72           C
ATOM   1053  N   ILE A 138      28.091  38.173   1.809  1.00 16.67           N
ATOM   1054  CA  ILE A 138      26.797  38.472   1.206  1.00 19.47           C
ATOM   1055  C   ILE A 138      25.700  37.622   1.830  1.00 19.09           C
ATOM   1056  O   ILE A 138      24.611  38.127   2.092  1.00 17.78           O
ATOM   1057  CB  ILE A 138      26.812  38.265  -0.326  1.00 20.07           C
ATOM   1058  CG1 ILE A 138      27.726  39.301  -0.968  1.00 21.59           C
ATOM   1059  CG2 ILE A 138      25.406  38.382  -0.903  1.00 18.48           C
ATOM   1060  CD1 ILE A 138      27.254  40.725  -0.756  1.00 26.67           C
ATOM   1061  N   ALA A 139      25.981  36.338   2.052  1.00 17.26           N
ATOM   1062  CA  ALA A 139      25.006  35.437   2.666  1.00 19.22           C
ATOM   1063  C   ALA A 139      24.615  35.924   4.073  1.00 20.71           C
ATOM   1064  O   ALA A 139      23.429  35.966   4.414  1.00 21.19           O
ATOM   1065  CB  ALA A 139      25.571  34.024   2.744  1.00 17.35           C
ATOM   1066  N   LYS A 140      25.622  36.316   4.858  1.00 17.75           N
ATOM   1067  CA  LYS A 140      25.437  36.809   6.227  1.00 17.29           C
ATOM   1068  C   LYS A 140      24.641  38.121   6.267  1.00 18.38           C
ATOM   1069  O   LYS A 140      23.748  38.294   7.100  1.00 17.92           O
ATOM   1070  CB  LYS A 140      26.794  36.993   6.922  1.00 15.11           C
ATOM   1071  CG  LYS A 140      27.497  35.709   7.283  1.00 21.07           C
ATOM   1072  CD  LYS A 140      26.642  34.914   8.258  1.00 27.61           C
ATOM   1073  CE  LYS A 140      27.291  33.619   8.693  1.00 32.72           C
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ATOM   1074  NZ  LYS A 140      26.599  33.079   9.900  1.00 33.12           N
ATOM   1075  N   ILE A 141      24.989  39.058   5.392  1.00 17.59           N
ATOM   1076  CA  ILE A 141      24.266  40.318   5.321  1.00 16.92           C
ATOM   1077  C   ILE A 141      22.804  40.011   4.970  1.00 18.76           C
ATOM   1078  O   ILE A 141      21.899  40.607   5.540  1.00 19.25           O
ATOM   1079  CB  ILE A 141      24.892  41.256   4.274  1.00 18.96           C
ATOM   1080  CG1 ILE A 141      26.238  41.764   4.794  1.00 17.85           C
ATOM   1081  CG2 ILE A 141      23.961  42.425   3.974  1.00 20.91           C
ATOM   1082  CD1 ILE A 141      27.142  42.386   3.731  1.00 17.12           C
ATOM   1083  N   ALA A 142      22.580  39.049   4.070  1.00 15.36           N
ATOM   1084  CA  ALA A 142      21.231  38.660   3.683  1.00 16.72           C
ATOM   1085  C   ALA A 142      20.500  38.120   4.898  1.00 17.63           C
ATOM   1086  O   ALA A 142      19.300  38.335   5.040  1.00 18.49           O
ATOM   1087  CB  ALA A 142      21.266  37.609   2.599  1.00 17.64           C
ATOM   1088  N   GLY A 143      21.226  37.404   5.760  1.00 17.58           N
ATOM   1089  CA  GLY A 143      20.643  36.853   6.978  1.00 15.41           C
ATOM   1090  C   GLY A 143      20.130  37.959   7.881  1.00 19.82           C
ATOM   1091  O   GLY A 143      19.034  37.855   8.426  1.00 20.03           O
ATOM   1092  N   ILE A 144      20.916  39.023   8.037  1.00 19.52           N
ATOM   1093  CA  ILE A 144      20.517  40.167   8.858  1.00 19.82           C
ATOM   1094  C   ILE A 144      19.284  40.839   8.264  1.00 17.55           C
ATOM   1095  O   ILE A 144      18.335  41.137   8.971  1.00 21.37           O
ATOM   1096  CB  ILE A 144      21.634  41.231   8.946  1.00 18.97           C
ATOM   1097  CG1 ILE A 144      22.830  40.680   9.723  1.00 16.65           C
ATOM   1098  CG2 ILE A 144      21.121  42.516   9.618  1.00 15.56           C
ATOM   1099  CD1 ILE A 144      24.048  41.579   9.620  1.00 14.80           C
ATOM   1100  N   LYS A 145      19.295  41.054   6.956  1.00 16.73           N
ATOM   1101  CA  LYS A 145      18.176  41.708   6.289  1.00 17.76           C
ATOM   1102  C   LYS A 145      16.894  40.879   6.317  1.00 17.44           C
ATOM   1103  O   LYS A 145      15.797  41.425   6.264  1.00 18.90           O
ATOM   1104  CB  LYS A 145      18.577  42.116   4.875  1.00 17.15           C
ATOM   1105  CG  LYS A 145      19.737  43.087   4.883  1.00 18.13           C
ATOM   1106  CD  LYS A 145      19.331  44.405   5.520  1.00 18.09           C
ATOM   1107  CE  LYS A 145      20.527  45.246   5.919  1.00 16.12           C
ATOM   1108  NZ  LYS A 145      20.054  46.447   6.647  1.00 19.86           N
ATOM   1109  N   LEU A 146      17.033  39.560   6.370  1.00 17.09           N
ATOM   1110  CA  LEU A 146      15.879  38.685   6.481  1.00 17.60           C
ATOM   1111  C   LEU A 146      15.248  38.992   7.840  1.00 19.27           C
ATOM   1112  O   LEU A 146      14.045  39.208   7.944  1.00 20.71           O
ATOM   1113  CB  LEU A 146      16.313  37.221   6.452  1.00 17.03           C
ATOM   1114  CG  LEU A 146      16.422  36.537   5.094  1.00 19.74           C
ATOM   1115  CD1 LEU A 146      17.113  35.202   5.239  1.00 17.44           C
ATOM   1116  CD2 LEU A 146      15.033  36.345   4.523  1.00 17.98           C
ATOM   1117  N   CYS A 147      16.083  39.056   8.872  1.00 19.54           N
ATOM   1118  CA  CYS A 147      15.620  39.333  10.227  1.00 20.46           C
ATOM   1119  C   CYS A 147      14.860  40.644  10.314  1.00 18.85           C
ATOM   1120  O   CYS A 147      13.730  40.679  10.796  1.00 22.18           O
ATOM   1121  CB  CYS A 147      16.797  39.363  11.209  1.00 18.64           C
ATOM   1122  SG  CYS A 147      17.473  37.734  11.641  1.00 21.48           S
ATOM   1123  N   GLU A 148      15.472  41.711   9.806  1.00 20.18           N
ATOM   1124  CA  GLU A 148      14.876  43.046   9.828  1.00 19.02           C
ATOM   1125  C   GLU A 148      13.551  43.102   9.068  1.00 19.69           C
ATOM   1126  O   GLU A 148      12.583  43.704   9.534  1.00 20.84           O
ATOM   1127  CB  GLU A 148      15.874  44.066   9.286  1.00 15.27           C
ATOM   1128  CG  GLU A 148      17.175  44.112  10.083  1.00 14.15           C
ATOM   1129  CD  GLU A 148      18.175  45.142   9.576  1.00 16.95           C
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ATOM   1130  OE1 GLU A 148      18.089  45.589   8.405  1.00 16.79           O
ATOM   1131  OE2 GLU A 148      19.070  45.508  10.368  1.00 20.51           O
ATOM   1132  N   SER A 149      13.490  42.379   7.954  1.00 19.93           N
ATOM   1133  CA  SER A 149      12.297  42.317   7.118  1.00 17.39           C
ATOM   1134  C   SER A 149      11.140  41.598   7.796  1.00 17.18           C
ATOM   1135  O   SER A 149      10.004  42.006   7.628  1.00 19.23           O
ATOM   1136  CB  SER A 149      12.632  41.678   5.767  1.00 17.54           C
ATOM   1137  OG  SER A 149      13.552  42.497   5.058  1.00 14.85           O
ATOM   1138  N   TYR A 150      11.420  40.526   8.542  1.00 19.56           N
ATOM   1139  CA  TYR A 150      10.367  39.799   9.268  1.00 19.65           C
ATOM   1140  C   TYR A 150       9.937  40.622  10.469  1.00 21.80           C
ATOM   1141  O   TYR A 150       8.781  40.588  10.870  1.00 21.40           O
ATOM   1142  CB  TYR A 150      10.822  38.406   9.715  1.00 16.51           C
ATOM   1143  CG  TYR A 150      10.688  37.367   8.624  1.00 18.75           C
ATOM   1144  CD1 TYR A 150      11.597  37.323   7.563  1.00 19.80           C
ATOM   1145  CD2 TYR A 150       9.617  36.477   8.608  1.00 19.63           C
ATOM   1146  CE1 TYR A 150      11.436  36.427   6.515  1.00 20.26           C
ATOM   1147  CE2 TYR A 150       9.445  35.570   7.554  1.00 19.95           C
ATOM   1148  CZ  TYR A 150      10.355  35.555   6.517  1.00 19.80           C
ATOM   1149  OH  TYR A 150      10.198  34.685   5.472  1.00 19.84           O
ATOM   1150  N   ASN A 151      10.878  41.364  11.041  1.00 19.55           N
ATOM   1151  CA  ASN A 151      10.571  42.233  12.163  1.00 21.48           C
ATOM   1152  C   ASN A 151       9.618  43.319  11.672  1.00 19.89           C
ATOM   1153  O   ASN A 151       8.623  43.607  12.317  1.00 21.09           O
ATOM   1154  CB  ASN A 151      11.834  42.900  12.708  1.00 18.21           C
ATOM   1155  CG  ASN A 151      12.724  41.949  13.481  1.00 18.09           C
ATOM   1156  OD1 ASN A 151      13.810  42.334  13.908  1.00 27.07           O
ATOM   1157  ND2 ASN A 151      12.282  40.714  13.664  1.00 14.19           N
ATOM   1158  N   ARG A 152       9.951  43.937  10.544  1.00 20.07           N
ATOM   1159  CA  ARG A 152       9.125  44.994   9.966  1.00 19.82           C
ATOM   1160  C   ARG A 152       7.745  44.520   9.513  1.00 19.24           C
ATOM   1161  O   ARG A 152       6.732  45.057   9.947  1.00 21.88           O
ATOM   1162  CB  ARG A 152       9.848  45.661   8.785  1.00 17.20           C
ATOM   1163  CG  ARG A 152      11.021  46.544   9.204  1.00 18.44           C
ATOM   1164  CD  ARG A 152      11.844  47.073   8.015  1.00 16.70           C
ATOM   1165  NE  ARG A 152      11.110  48.049   7.219  1.00 20.17           N
ATOM   1166  CZ  ARG A 152      11.152  48.111   5.893  1.00 23.14           C
ATOM   1167  NH1 ARG A 152      11.894  47.247   5.212  1.00 24.13           N
ATOM   1168  NH2 ARG A 152      10.460  49.043   5.246  1.00 22.13           N
ATOM   1169  N   GLN A 153       7.703  43.491   8.677  1.00 17.96           N
ATOM   1170  CA  GLN A 153       6.440  43.004   8.160  1.00 18.98           C
ATOM   1171  C   GLN A 153       5.545  42.301   9.148  1.00 19.52           C
ATOM   1172  O   GLN A 153       4.381  42.640   9.268  1.00 22.00           O
ATOM   1173  CB  GLN A 153       6.662  42.080   6.969  1.00 18.96           C
ATOM   1174  CG  GLN A 153       5.368  41.751   6.210  1.00 18.96           C
ATOM   1175  CD  GLN A 153       5.578  40.867   4.984  1.00 19.71           C
ATOM   1176  OE1 GLN A 153       4.682  40.129   4.580  1.00 24.49           O
ATOM   1177  NE2 GLN A 153       6.749  40.945   4.387  1.00 12.01           N
ATOM   1178  N   TYR A 154       6.085  41.314   9.850  1.00 22.05           N
ATOM   1179  CA  TYR A 154       5.301  40.509  10.791  1.00 21.40           C
ATOM   1180  C   TYR A 154       5.363  40.844  12.275  1.00 20.30           C
ATOM   1181  O   TYR A 154       4.693  40.212  13.080  1.00 24.19           O
ATOM   1182  CB  TYR A 154       5.630  39.032  10.574  1.00 20.75           C
ATOM   1183  CG  TYR A 154       5.360  38.559   9.153  1.00 28.22           C
ATOM   1184  CD1 TYR A 154       4.048  38.356   8.700  1.00 26.30           C
ATOM   1185  CD2 TYR A 154       6.411  38.283   8.271  1.00 24.56           C
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ATOM   1186  CE1 TYR A 154       3.789  37.885   7.410  1.00 26.91           C
ATOM   1187  CE2 TYR A 154       6.163  37.807   6.974  1.00 27.24           C
ATOM   1188  CZ  TYR A 154       4.849  37.611   6.550  1.00 32.07           C
ATOM   1189  OH  TYR A 154       4.597  37.135   5.272  1.00 31.35           O
ATOM   1190  N   GLY A 155       6.144  41.847  12.638  1.00 19.87           N
ATOM   1191  CA  GLY A 155       6.253  42.217  14.034  1.00 22.22           C
ATOM   1192  C   GLY A 155       7.013  41.198  14.859  1.00 24.59           C
ATOM   1193  O   GLY A 155       6.732  41.021  16.043  1.00 26.39           O
ATOM   1194  N   ARG A 156       7.974  40.521  14.238  1.00 24.00           N
ATOM   1195  CA  ARG A 156       8.787  39.532  14.938  1.00 22.84           C
ATOM   1196  C   ARG A 156       9.876  40.216  15.775  1.00 22.01           C
ATOM   1197  O   ARG A 156      10.028  41.444  15.756  1.00 19.01           O
ATOM   1198  CB  ARG A 156       9.421  38.565  13.943  1.00 18.51           C
ATOM   1199  CG  ARG A 156       8.434  37.660  13.261  1.00 18.13           C
ATOM   1200  CD  ARG A 156       7.745  36.824  14.286  1.00 19.71           C
ATOM   1201  NE  ARG A 156       6.784  35.907  13.695  1.00 21.63           N
ATOM   1202  CZ  ARG A 156       5.811  35.300  14.374  1.00 23.57           C
ATOM   1203  NH1 ARG A 156       5.663  35.518  15.671  1.00 25.52           N
ATOM   1204  NH2 ARG A 156       5.006  34.442  13.764  1.00 23.91           N
ATOM   1205  N   ASP A 157      10.617  39.401  16.520  1.00 22.14           N
ATOM   1206  CA  ASP A 157      11.701  39.877  17.375  1.00 24.80           C
ATOM   1207  C   ASP A 157      12.947  39.036  17.057  1.00 24.84           C
ATOM   1208  O   ASP A 157      13.409  38.230  17.878  1.00 23.50           O
ATOM   1209  CB  ASP A 157      11.302  39.722  18.844  1.00 23.72           C
ATOM   1210  CG  ASP A 157      12.291  40.353  19.789  1.00 26.71           C
ATOM   1211  OD1 ASP A 157      13.133  41.161  19.351  1.00 30.67           O
ATOM   1212  OD2 ASP A 157      12.220  40.044  20.990  1.00 28.81           O
ATOM   1213  N   TYR A 158      13.447  39.211  15.835  1.00 22.75           N
ATOM   1214  CA  TYR A 158      14.619  38.498  15.345  1.00 18.46           C
ATOM   1215  C   TYR A 158      15.791  39.451  15.418  1.00 19.09           C
ATOM   1216  O   TYR A 158      15.914  40.368  14.611  1.00 17.30           O
ATOM   1217  CB  TYR A 158      14.383  38.045  13.911  1.00 18.04           C
ATOM   1218  CG  TYR A 158      13.249  37.059  13.756  1.00 18.53           C
ATOM   1219  CD1 TYR A 158      12.615  36.505  14.879  1.00 20.52           C
ATOM   1220  CD2 TYR A 158      12.832  36.644  12.492  1.00 17.60           C
ATOM   1221  CE1 TYR A 158      11.598  35.558  14.745  1.00 21.39           C
ATOM   1222  CE2 TYR A 158      11.819  35.699  12.343  1.00 20.24           C
ATOM   1223  CZ  TYR A 158      11.207  35.157  13.473  1.00 24.50           C
ATOM   1224  OH  TYR A 158      10.229  34.196  13.330  1.00 23.67           O
ATOM   1225  N   ARG A 159      16.633  39.235  16.422  1.00 20.75           N
ATOM   1226  CA  ARG A 159      17.799  40.067  16.685  1.00 19.58           C
ATOM   1227  C   ARG A 159      19.064  39.450  16.092  1.00 21.42           C
ATOM   1228  O   ARG A 159      19.077  38.261  15.760  1.00 18.88           O
ATOM   1229  CB  ARG A 159      17.955  40.231  18.195  1.00 20.48           C
ATOM   1230  CG  ARG A 159      16.642  40.531  18.862  1.00 19.82           C
ATOM   1231  CD  ARG A 159      16.783  40.804  20.325  1.00 23.76           C
ATOM   1232  NE  ARG A 159      15.486  41.101  20.932  1.00 26.89           N
ATOM   1233  CZ  ARG A 159      15.308  41.413  22.215  1.00 32.91           C
ATOM   1234  NH1 ARG A 159      16.345  41.477  23.045  1.00 29.23           N
ATOM   1235  NH2 ARG A 159      14.089  41.651  22.674  1.00 26.98           N
ATOM   1236  N   SER A 160      20.120  40.256  15.973  1.00 20.58           N
ATOM   1237  CA  SER A 160      21.383  39.790  15.401  1.00 22.86           C
ATOM   1238  C   SER A 160      22.623  40.445  16.035  1.00 23.61           C
ATOM   1239  O   SER A 160      22.613  41.631  16.391  1.00 27.28           O
ATOM   1240  CB  SER A 160      21.369  40.010  13.878  1.00 18.64           C
ATOM   1241  OG  SER A 160      21.189  41.377  13.584  1.00 21.88           O
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ATOM   1242  N   VAL A 161      23.673  39.644  16.220  1.00 21.16           N
ATOM   1243  CA  VAL A 161      24.925  40.128  16.789  1.00 22.84           C
ATOM   1244  C   VAL A 161      26.071  39.869  15.815  1.00 24.11           C
ATOM   1245  O   VAL A 161      26.115  38.836  15.152  1.00 23.19           O
ATOM   1246  CB  VAL A 161      25.218  39.495  18.164  1.00 20.00           C
ATOM   1247  CG1 VAL A 161      24.165  39.917  19.171  1.00 15.73           C
ATOM   1248  CG2 VAL A 161      25.269  38.000  18.044  1.00 17.25           C
ATOM   1249  N   MET A 162      26.998  40.815  15.756  1.00 26.02           N
ATOM   1250  CA  MET A 162      28.155  40.749  14.857  1.00 25.91           C
ATOM   1251  C   MET A 162      29.428  40.599  15.646  1.00 24.51           C
ATOM   1252  O   MET A 162      29.988  41.583  16.123  1.00 23.78           O
ATOM   1253  CB  MET A 162      28.218  42.035  14.050  1.00 30.64           C
ATOM   1254  CG  MET A 162      28.850  41.863  12.698  1.00 39.34           C
ATOM   1255  SD  MET A 162      27.639  41.548  11.415  1.00 53.27           S
ATOM   1256  CE  MET A 162      26.536  40.289  12.127  1.00 36.94           C
ATOM   1257  N   PRO A 163      29.918  39.370  15.786  1.00 24.89           N
ATOM   1258  CA  PRO A 163      31.159  39.159  16.549  1.00 26.54           C
ATOM   1259  C   PRO A 163      32.448  39.526  15.831  1.00 25.28           C
ATOM   1260  O   PRO A 163      32.517  39.474  14.610  1.00 25.95           O
ATOM   1261  CB  PRO A 163      31.133  37.655  16.847  1.00 23.73           C
ATOM   1262  CG  PRO A 163      29.897  37.115  16.115  1.00 31.41           C
ATOM   1263  CD  PRO A 163      29.499  38.138  15.125  1.00 26.18           C
ATOM   1264  N   THR A 164      33.470  39.893  16.603  1.00 22.10           N
ATOM   1265  CA  THR A 164      34.788  40.189  16.060  1.00 23.78           C
ATOM   1266  C   THR A 164      35.478  38.805  15.910  1.00 23.23           C
ATOM   1267  O   THR A 164      34.780  37.788  15.887  1.00 22.37           O
ATOM   1268  CB  THR A 164      35.578  41.123  17.031  1.00 22.50           C
ATOM   1269  OG1 THR A 164      36.853  41.454  16.471  1.00 23.40           O
ATOM   1270  CG2 THR A 164      35.758  40.481  18.399  1.00 14.86           C
ATOM   1271  N   ASN A 165      36.808  38.748  15.809  1.00 21.33           N
ATOM   1272  CA  ASN A 165      37.514  37.454  15.695  1.00 20.80           C
ATOM   1273  C   ASN A 165      37.332  36.670  16.989  1.00 21.60           C
ATOM   1274  O   ASN A 165      37.571  37.190  18.073  1.00 19.56           O
ATOM   1275  CB  ASN A 165      39.022  37.634  15.450  1.00 23.42           C
ATOM   1276  CG  ASN A 165      39.325  38.488  14.237  1.00 28.81           C
ATOM   1277  OD1 ASN A 165      38.899  38.184  13.123  1.00 32.12           O
ATOM   1278  ND2 ASN A 165      40.054  39.584  14.455  1.00 30.18           N
ATOM   1279  N   LEU A 166      36.916  35.417  16.861  1.00 22.74           N
ATOM   1280  CA  LEU A 166      36.678  34.563  18.008  1.00 21.57           C
ATOM   1281  C   LEU A 166      37.736  33.491  18.137  1.00 24.04           C
ATOM   1282  O   LEU A 166      38.424  33.167  17.181  1.00 27.78           O
ATOM   1283  CB  LEU A 166      35.313  33.892  17.894  1.00 21.43           C
ATOM   1284  CG  LEU A 166      34.065  34.774  17.812  1.00 22.20           C
ATOM   1285  CD1 LEU A 166      32.835  33.883  17.825  1.00 21.95           C
ATOM   1286  CD2 LEU A 166      34.013  35.741  18.967  1.00 16.86           C
ATOM   1287  N   TYR A 167      37.871  32.964  19.346  1.00 24.38           N
ATOM   1288  CA  TYR A 167      38.819  31.901  19.634  1.00 23.56           C
ATOM   1289  C   TYR A 167      38.337  31.215  20.916  1.00 25.61           C
ATOM   1290  O   TYR A 167      37.493  31.750  21.635  1.00 23.71           O
ATOM   1291  CB  TYR A 167      40.247  32.470  19.796  1.00 23.51           C
ATOM   1292  CG  TYR A 167      40.499  33.242  21.083  1.00 24.80           C
ATOM   1293  CD1 TYR A 167      40.177  34.599  21.189  1.00 22.13           C
ATOM   1294  CD2 TYR A 167      41.044  32.603  22.207  1.00 22.06           C
ATOM   1295  CE1 TYR A 167      40.391  35.292  22.379  1.00 23.72           C
ATOM   1296  CE2 TYR A 167      41.255  33.284  23.388  1.00 20.75           C
ATOM   1297  CZ  TYR A 167      40.928  34.619  23.467  1.00 23.11           C
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ATOM   1298  OH  TYR A 167      41.133  35.277  24.641  1.00 27.04           O
ATOM   1299  N   GLY A 168      38.862  30.028  21.196  1.00 26.18           N
ATOM   1300  CA  GLY A 168      38.469  29.302  22.395  1.00 24.41           C
ATOM   1301  C   GLY A 168      38.358  27.819  22.096  1.00 25.69           C
ATOM   1302  O   GLY A 168      38.862  27.366  21.067  1.00 22.25           O
ATOM   1303  N   PRO A 169      37.763  27.020  22.999  1.00 27.31           N
ATOM   1304  CA  PRO A 169      37.641  25.587  22.723  1.00 28.17           C
ATOM   1305  C   PRO A 169      36.712  25.281  21.545  1.00 31.05           C
ATOM   1306  O   PRO A 169      35.784  26.043  21.245  1.00 32.73           O
ATOM   1307  CB  PRO A 169      37.093  25.028  24.038  1.00 29.76           C
ATOM   1308  CG  PRO A 169      36.435  26.200  24.693  1.00 29.13           C
ATOM   1309  CD  PRO A 169      37.382  27.322  24.390  1.00 24.91           C
ATOM   1310  N   HIS A 170      36.989  24.162  20.882  1.00 29.85           N
ATOM   1311  CA  HIS A 170      36.221  23.684  19.736  1.00 33.39           C
ATOM   1312  C   HIS A 170      36.491  24.432  18.465  1.00 33.49           C
ATOM   1313  O   HIS A 170      35.829  24.220  17.456  1.00 36.59           O
ATOM   1314  CB  HIS A 170      34.730  23.625  20.053  1.00 33.83           C
ATOM   1315  CG  HIS A 170      34.416  22.657  21.138  1.00 36.78           C
ATOM   1316  ND1 HIS A 170      34.350  21.295  20.912  1.00 38.83           N
ATOM   1317  CD2 HIS A 170      34.273  22.824  22.474  1.00 39.24           C
ATOM   1318  CE1 HIS A 170      34.188  20.673  22.067  1.00 41.36           C
ATOM   1319  NE2 HIS A 170      34.138  21.579  23.029  1.00 39.69           N
ATOM   1320  N   ASP A 171      37.498  25.291  18.514  1.00 33.58           N
ATOM   1321  CA  ASP A 171      37.914  26.051  17.353  1.00 32.22           C
ATOM   1322  C   ASP A 171      38.604  25.025  16.447  1.00 35.48           C
ATOM   1323  O   ASP A 171      38.851  23.881  16.852  1.00 36.59           O
ATOM   1324  CB  ASP A 171      38.915  27.130  17.779  1.00 28.29           C
ATOM   1325  CG  ASP A 171      39.064  28.239  16.753  1.00 28.15           C
ATOM   1326  OD1 ASP A 171      38.622  28.071  15.598  1.00 29.33           O
ATOM   1327  OD2 ASP A 171      39.625  29.295  17.111  1.00 28.62           O
ATOM   1328  N   ASN A 172      38.895  25.422  15.219  1.00 36.84           N
ATOM   1329  CA  ASN A 172      39.562  24.531  14.288  1.00 38.89           C
ATOM   1330  C   ASN A 172      41.079  24.608  14.477  1.00 41.26           C
ATOM   1331  O   ASN A 172      41.734  25.509  13.956  1.00 41.31           O
ATOM   1332  CB  ASN A 172      39.173  24.906  12.858  1.00 42.20           C
ATOM   1333  CG  ASN A 172      39.843  24.034  11.814  1.00 43.37           C
ATOM   1334  OD1 ASN A 172      40.580  23.097  12.130  1.00 45.57           O
ATOM   1335  ND2 ASN A 172      39.595  24.353  10.552  1.00 44.12           N
ATOM   1336  N   PHE A 173      41.635  23.661  15.226  1.00 44.88           N
ATOM   1337  CA  PHE A 173      43.073  23.647  15.463  1.00 49.71           C
ATOM   1338  C   PHE A 173      43.851  22.871  14.419  1.00 57.76           C
ATOM   1339  O   PHE A 173      45.059  22.682  14.568  1.00 59.18           O
ATOM   1340  CB  PHE A 173      43.399  23.110  16.852  1.00 42.32           C
ATOM   1341  CG  PHE A 173      43.084  24.071  17.948  1.00 40.20           C
ATOM   1342  CD1 PHE A 173      44.013  25.025  18.331  1.00 36.39           C
ATOM   1343  CD2 PHE A 173      41.844  24.043  18.579  1.00 37.77           C
ATOM   1344  CE1 PHE A 173      43.707  25.936  19.322  1.00 36.91           C
ATOM   1345  CE2 PHE A 173      41.530  24.950  19.572  1.00 34.93           C
ATOM   1346  CZ  PHE A 173      42.458  25.898  19.945  1.00 34.54           C
ATOM   1347  N   HIS A 174      43.162  22.422  13.368  1.00 65.47           N
ATOM   1348  CA  HIS A 174      43.805  21.677  12.291  1.00 69.58           C
ATOM   1349  C   HIS A 174      44.825  22.603  11.620  1.00 74.04           C
ATOM   1350  O   HIS A 174      44.725  23.834  11.717  1.00 73.03           O
ATOM   1351  CB  HIS A 174      42.761  21.181  11.280  1.00 65.86           C
ATOM   1352  N   PRO A 175      45.864  22.022  10.993  1.00 78.70           N
ATOM   1353  CA  PRO A 175      46.911  22.798  10.312  1.00 79.02           C
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ATOM   1354  C   PRO A 175      46.389  23.590   9.108  1.00 78.90           C
ATOM   1355  O   PRO A 175      47.009  24.564   8.677  1.00 80.21           O
ATOM   1356  CB  PRO A 175      47.905  21.719   9.890  1.00 81.10           C
ATOM   1357  CG  PRO A 175      47.021  20.508   9.682  1.00 82.81           C
ATOM   1358  CD  PRO A 175      46.136  20.576  10.896  1.00 79.77           C
ATOM   1359  N   SER A 176      45.234  23.182   8.592  1.00 77.86           N
ATOM   1360  CA  SER A 176      44.609  23.838   7.448  1.00 77.58           C
ATOM   1361  C   SER A 176      43.990  25.204   7.803  1.00 77.32           C
ATOM   1362  O   SER A 176      43.824  26.058   6.924  1.00 76.05           O
ATOM   1363  CB  SER A 176      43.522  22.928   6.867  1.00 77.75           C
ATOM   1364  OG  SER A 176      43.956  21.581   6.822  1.00 76.89           O
ATOM   1365  N   ASN A 177      43.644  25.400   9.080  1.00 76.69           N
ATOM   1366  CA  ASN A 177      43.023  26.651   9.545  1.00 75.04           C
ATOM   1367  C   ASN A 177      43.955  27.852   9.485  1.00 71.80           C
ATOM   1368  O   ASN A 177      45.039  27.850  10.085  1.00 69.86           O
ATOM   1369  CB  ASN A 177      42.460  26.518  10.974  1.00 78.55           C
ATOM   1370  CG  ASN A 177      41.521  27.682  11.354  1.00 80.02           C
ATOM   1371  OD1 ASN A 177      41.019  28.396  10.481  1.00 80.14           O
ATOM   1372  ND2 ASN A 177      41.267  27.855  12.653  1.00 78.23           N
ATOM   1373  N   SER A 178      43.483  28.891   8.795  1.00 68.03           N
ATOM   1374  CA  SER A 178      44.229  30.132   8.616  1.00 62.59           C
ATOM   1375  C   SER A 178      44.062  31.148   9.757  1.00 61.87           C
ATOM   1376  O   SER A 178      44.877  32.076   9.866  1.00 63.25           O
ATOM   1377  CB  SER A 178      43.866  30.789   7.272  1.00 58.38           C
ATOM   1378  OG  SER A 178      42.529  31.262   7.256  1.00 48.45           O
ATOM   1379  N   HIS A 179      43.031  30.980  10.599  1.00 56.38           N
ATOM   1380  CA  HIS A 179      42.789  31.910  11.711  1.00 49.88           C
ATOM   1381  C   HIS A 179      44.002  31.942  12.611  1.00 43.41           C
ATOM   1382  O   HIS A 179      44.491  30.905  13.074  1.00 38.69           O
ATOM   1383  CB  HIS A 179      41.508  31.576  12.474  1.00 56.03           C
ATOM   1384  CG  HIS A 179      40.267  31.778  11.659  1.00 63.85           C
ATOM   1385  ND1 HIS A 179      39.265  30.832  11.575  1.00 68.72           N
ATOM   1386  CD2 HIS A 179      39.908  32.782  10.821  1.00 63.79           C
ATOM   1387  CE1 HIS A 179      38.350  31.240  10.712  1.00 67.61           C
ATOM   1388  NE2 HIS A 179      38.717  32.420  10.240  1.00 64.39           N
ATOM   1389  N   VAL A 180      44.518  33.153  12.771  1.00 36.75           N
ATOM   1390  CA  VAL A 180      45.728  33.411  13.521  1.00 34.97           C
ATOM   1391  C   VAL A 180      45.880  32.769  14.918  1.00 32.02           C
ATOM   1392  O   VAL A 180      46.880  32.086  15.156  1.00 34.93           O
ATOM   1393  CB  VAL A 180      46.080  34.941  13.477  1.00 34.69           C
ATOM   1394  CG1 VAL A 180      45.248  35.738  14.460  1.00 30.50           C
ATOM   1395  CG2 VAL A 180      47.547  35.149  13.697  1.00 35.95           C
ATOM   1396  N   ILE A 181      44.892  32.883  15.804  1.00 26.56           N
ATOM   1397  CA  ILE A 181      45.062  32.290  17.138  1.00 24.42           C
ATOM   1398  C   ILE A 181      45.260  30.765  17.170  1.00 24.83           C
ATOM   1399  O   ILE A 181      46.270  30.287  17.687  1.00 24.99           O
ATOM   1400  CB  ILE A 181      44.000  32.782  18.156  1.00 19.83           C
ATOM   1401  CG1 ILE A 181      44.276  34.252  18.493  1.00 20.16           C
ATOM   1402  CG2 ILE A 181      44.041  31.946  19.438  1.00 17.27           C
ATOM   1403  CD1 ILE A 181      43.331  34.847  19.510  1.00 20.91           C
ATOM   1404  N   PRO A 182      44.316  29.981  16.615  1.00 23.52           N
ATOM   1405  CA  PRO A 182      44.552  28.537  16.658  1.00 23.52           C
ATOM   1406  C   PRO A 182      45.762  28.096  15.829  1.00 24.72           C
ATOM   1407  O   PRO A 182      46.398  27.094  16.153  1.00 26.08           O
ATOM   1408  CB  PRO A 182      43.230  27.953  16.138  1.00 22.43           C
ATOM   1409  CG  PRO A 182      42.654  29.047  15.315  1.00 23.74           C
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ATOM   1410  CD  PRO A 182      42.958  30.270  16.135  1.00 25.45           C
ATOM   1411  N   ALA A 183      46.094  28.847  14.780  1.00 24.74           N
ATOM   1412  CA  ALA A 183      47.248  28.519  13.940  1.00 26.58           C
ATOM   1413  C   ALA A 183      48.550  28.747  14.713  1.00 27.08           C
ATOM   1414  O   ALA A 183      49.487  27.947  14.615  1.00 27.25           O
ATOM   1415  CB  ALA A 183      47.255  29.363  12.663  1.00 26.62           C
ATOM   1416  N   LEU A 184      48.612  29.846  15.467  1.00 27.56           N
ATOM   1417  CA  LEU A 184      49.804  30.152  16.253  1.00 25.42           C
ATOM   1418  C   LEU A 184      49.938  29.268  17.483  1.00 24.12           C
ATOM   1419  O   LEU A 184      51.045  28.915  17.861  1.00 25.56           O
ATOM   1420  CB  LEU A 184      49.865  31.636  16.629  1.00 25.08           C
ATOM   1421  CG  LEU A 184      50.185  32.559  15.450  1.00 26.86           C
ATOM   1422  CD1 LEU A 184      50.303  33.997  15.932  1.00 25.67           C
ATOM   1423  CD2 LEU A 184      51.481  32.112  14.782  1.00 22.86           C
ATOM   1424  N   LEU A 185      48.825  28.907  18.113  1.00 24.00           N
ATOM   1425  CA  LEU A 185      48.903  28.038  19.276  1.00 22.14           C
ATOM   1426  C   LEU A 185      49.527  26.723  18.849  1.00 23.38           C
ATOM   1427  O   LEU A 185      50.441  26.231  19.493  1.00 25.13           O
ATOM   1428  CB  LEU A 185      47.524  27.792  19.890  1.00 22.97           C
ATOM   1429  CG  LEU A 185      47.061  28.783  20.962  1.00 25.88           C
ATOM   1430  CD1 LEU A 185      45.633  28.474  21.350  1.00 27.24           C
ATOM   1431  CD2 LEU A 185      47.953  28.716  22.188  1.00 22.77           C
ATOM   1432  N   ARG A 186      49.073  26.203  17.714  1.00 24.14           N
ATOM   1433  CA  ARG A 186      49.569  24.948  17.169  1.00 25.34           C
ATOM   1434  C   ARG A 186      51.048  25.034  16.810  1.00 24.95           C
ATOM   1435  O   ARG A 186      51.833  24.187  17.212  1.00 26.26           O
ATOM   1436  CB  ARG A 186      48.759  24.583  15.925  1.00 31.52           C
ATOM   1437  CG  ARG A 186      49.073  23.233  15.318  1.00 42.48           C
ATOM   1438  CD  ARG A 186      48.392  22.118  16.098  1.00 57.91           C
ATOM   1439  NE  ARG A 186      48.619  20.790  15.519  1.00 68.83           N
ATOM   1440  CZ  ARG A 186      47.761  20.142  14.729  1.00 74.96           C
ATOM   1441  NH1 ARG A 186      46.595  20.682  14.401  1.00 79.10           N
ATOM   1442  NH2 ARG A 186      48.065  18.934  14.273  1.00 79.84           N
ATOM   1443  N   ARG A 187      51.435  26.059  16.054  1.00 24.62           N
ATOM   1444  CA  ARG A 187      52.829  26.214  15.644  1.00 25.65           C
ATOM   1445  C   ARG A 187      53.790  26.369  16.826  1.00 25.29           C
ATOM   1446  O   ARG A 187      54.839  25.727  16.871  1.00 24.51           O
ATOM   1447  CB  ARG A 187      52.981  27.399  14.688  1.00 25.15           C
ATOM   1448  CG  ARG A 187      52.167  27.263  13.417  1.00 32.95           C
ATOM   1449  CD  ARG A 187      52.480  28.391  12.462  1.00 36.42           C
ATOM   1450  NE  ARG A 187      53.913  28.446  12.184  1.00 36.07           N
ATOM   1451  CZ  ARG A 187      54.544  29.508  11.699  1.00 33.64           C
ATOM   1452  NH1 ARG A 187      53.870  30.621  11.435  1.00 31.47           N
ATOM   1453  NH2 ARG A 187      55.850  29.448  11.465  1.00 33.04           N
ATOM   1454  N   PHE A 188      53.436  27.221  17.779  1.00 22.44           N
ATOM   1455  CA  PHE A 188      54.282  27.421  18.945  1.00 25.19           C
ATOM   1456  C   PHE A 188      54.337  26.174  19.808  1.00 25.71           C
ATOM   1457  O   PHE A 188      55.354  25.892  20.431  1.00 25.63           O
ATOM   1458  CB  PHE A 188      53.821  28.637  19.753  1.00 23.20           C
ATOM   1459  CG  PHE A 188      54.286  29.939  19.177  1.00 25.71           C
ATOM   1460  CD1 PHE A 188      55.647  30.235  19.110  1.00 27.25           C
ATOM   1461  CD2 PHE A 188      53.376  30.851  18.660  1.00 25.83           C
ATOM   1462  CE1 PHE A 188      56.098  31.430  18.529  1.00 32.00           C
ATOM   1463  CE2 PHE A 188      53.810  32.044  18.077  1.00 29.35           C
ATOM   1464  CZ  PHE A 188      55.177  32.336  18.010  1.00 28.41           C
ATOM   1465  N   HIS A 189      53.241  25.424  19.835  1.00 25.11           N
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ATOM   1466  CA  HIS A 189      53.189  24.190  20.599  1.00 27.94           C
ATOM   1467  C   HIS A 189      54.224  23.213  20.047  1.00 28.28           C
ATOM   1468  O   HIS A 189      54.995  22.606  20.797  1.00 27.38           O
ATOM   1469  CB  HIS A 189      51.801  23.547  20.510  1.00 28.07           C
ATOM   1470  CG  HIS A 189      51.744  22.170  21.092  1.00 30.32           C
ATOM   1471  ND1 HIS A 189      51.704  21.940  22.449  1.00 29.13           N
ATOM   1472  CD2 HIS A 189      51.777  20.949  20.504  1.00 28.20           C
ATOM   1473  CE1 HIS A 189      51.717  20.640  22.673  1.00 28.62           C
ATOM   1474  NE2 HIS A 189      51.760  20.015  21.511  1.00 27.91           N
ATOM   1475  N   GLU A 190      54.208  23.046  18.732  1.00 26.08           N
ATOM   1476  CA  GLU A 190      55.132  22.148  18.081  1.00 30.47           C
ATOM   1477  C   GLU A 190      56.569  22.632  18.068  1.00 30.23           C
ATOM   1478  O   GLU A 190      57.490  21.827  18.211  1.00 33.16           O
ATOM   1479  CB  GLU A 190      54.637  21.816  16.691  1.00 35.82           C
ATOM   1480  CG  GLU A 190      53.722  20.621  16.736  1.00 51.77           C
ATOM   1481  CD  GLU A 190      52.624  20.704  15.724  1.00 61.78           C
ATOM   1482  OE1 GLU A 190      52.925  20.772  14.511  1.00 65.36           O
ATOM   1483  OE2 GLU A 190      51.455  20.705  16.153  1.00 69.95           O
ATOM   1484  N   ALA A 191      56.763  23.942  17.928  1.00 28.59           N
ATOM   1485  CA  ALA A 191      58.106  24.517  17.939  1.00 26.34           C
ATOM   1486  C   ALA A 191      58.714  24.292  19.328  1.00 26.65           C
ATOM   1487  O   ALA A 191      59.915  24.052  19.459  1.00 28.75           O
ATOM   1488  CB  ALA A 191      58.056  26.008  17.610  1.00 19.04           C
ATOM   1489  N   THR A 192      57.876  24.358  20.361  1.00 25.68           N
ATOM   1490  CA  THR A 192      58.316  24.145  21.736  1.00 25.41           C
ATOM   1491  C   THR A 192      58.703  22.676  21.944  1.00 31.21           C
ATOM   1492  O   THR A 192      59.746  22.382  22.527  1.00 35.48           O
ATOM   1493  CB  THR A 192      57.211  24.530  22.730  1.00 22.90           C
ATOM   1494  OG1 THR A 192      56.880  25.912  22.564  1.00 25.40           O
ATOM   1495  CG2 THR A 192      57.669  24.307  24.150  1.00 18.73           C
ATOM   1496  N   ALA A 193      57.876  21.769  21.419  1.00 34.95           N
ATOM   1497  CA  ALA A 193      58.082  20.320  21.524  1.00 37.97           C
ATOM   1498  C   ALA A 193      59.304  19.802  20.755  1.00 40.01           C
ATOM   1499  O   ALA A 193      59.972  18.862  21.194  1.00 43.02           O
ATOM   1500  CB  ALA A 193      56.816  19.575  21.063  1.00 32.24           C
ATOM   1501  N   GLN A 194      59.574  20.401  19.598  1.00 41.65           N
ATOM   1502  CA  GLN A 194      60.705  19.999  18.765  1.00 43.74           C
ATOM   1503  C   GLN A 194      61.928  20.851  19.075  1.00 43.03           C
ATOM   1504  O   GLN A 194      62.992  20.683  18.479  1.00 45.56           O
ATOM   1505  CB  GLN A 194      60.333  20.119  17.288  1.00 47.15           C
ATOM   1506  CG  GLN A 194      59.162  19.232  16.872  1.00 56.01           C
ATOM   1507  CD  GLN A 194      58.499  19.703  15.580  1.00 64.14           C
ATOM   1508  OE1 GLN A 194      57.425  19.213  15.195  1.00 65.43           O
ATOM   1509  NE2 GLN A 194      59.126  20.673  14.913  1.00 63.87           N
ATOM   1510  N   ASN A 195      61.759  21.771  20.015  1.00 43.24           N
ATOM   1511  CA  ASN A 195      62.817  22.667  20.445  1.00 44.65           C
ATOM   1512  C   ASN A 195      63.471  23.485  19.321  1.00 41.93           C
ATOM   1513  O   ASN A 195      64.691  23.684  19.316  1.00 40.98           O
ATOM   1514  CB  ASN A 195      63.867  21.884  21.234  1.00 53.08           C
ATOM   1515  CG  ASN A 195      64.455  22.695  22.368  1.00 63.65           C
ATOM   1516  OD1 ASN A 195      65.666  22.686  22.588  1.00 71.19           O
ATOM   1517  ND2 ASN A 195      63.596  23.414  23.094  1.00 66.69           N
ATOM   1518  N   ALA A 196      62.647  23.986  18.396  1.00 36.18           N
ATOM   1519  CA  ALA A 196      63.113  24.793  17.270  1.00 28.56           C
ATOM   1520  C   ALA A 196      63.671  26.125  17.764  1.00 30.66           C
ATOM   1521  O   ALA A 196      63.073  26.782  18.608  1.00 30.34           O
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ATOM   1522  CB  ALA A 196      61.979  25.026  16.317  1.00 29.20           C
ATOM   1523  N   PRO A 197      64.836  26.544  17.240  1.00 31.27           N
ATOM   1524  CA  PRO A 197      65.444  27.813  17.669  1.00 28.32           C
ATOM   1525  C   PRO A 197      64.599  29.055  17.410  1.00 26.38           C
ATOM   1526  O   PRO A 197      64.664  30.023  18.169  1.00 22.20           O
ATOM   1527  CB  PRO A 197      66.766  27.836  16.896  1.00 28.56           C
ATOM   1528  CG  PRO A 197      66.464  27.016  15.661  1.00 33.14           C
ATOM   1529  CD  PRO A 197      65.659  25.874  16.218  1.00 29.19           C
ATOM   1530  N   ASP A 198      63.802  29.024  16.346  1.00 26.81           N
ATOM   1531  CA  ASP A 198      62.939  30.152  16.022  1.00 28.91           C
ATOM   1532  C   ASP A 198      61.641  29.786  15.293  1.00 27.16           C
ATOM   1533  O   ASP A 198      61.473  28.670  14.802  1.00 24.09           O
ATOM   1534  CB  ASP A 198      63.721  31.224  15.241  1.00 33.13           C
ATOM   1535  CG  ASP A 198      64.183  30.754  13.858  1.00 40.57           C
ATOM   1536  OD1 ASP A 198      63.929  29.598  13.444  1.00 48.38           O
ATOM   1537  OD2 ASP A 198      64.805  31.572  13.157  1.00 49.60           O
ATOM   1538  N   VAL A 199      60.703  30.727  15.285  1.00 27.51           N
ATOM   1539  CA  VAL A 199      59.425  30.563  14.611  1.00 24.78           C
ATOM   1540  C   VAL A 199      59.251  31.819  13.782  1.00 23.64           C
ATOM   1541  O   VAL A 199      59.158  32.921  14.328  1.00 21.04           O
ATOM   1542  CB  VAL A 199      58.252  30.457  15.597  1.00 27.41           C
ATOM   1543  CG1 VAL A 199      56.931  30.544  14.846  1.00 24.95           C
ATOM   1544  CG2 VAL A 199      58.327  29.145  16.362  1.00 26.46           C
ATOM   1545  N   VAL A 200      59.235  31.659  12.463  1.00 22.12           N
ATOM   1546  CA  VAL A 200      59.092  32.802  11.581  1.00 20.64           C
ATOM   1547  C   VAL A 200      57.638  33.044  11.226  1.00 19.29           C
ATOM   1548  O   VAL A 200      56.930  32.125  10.865  1.00 20.60           O
ATOM   1549  CB  VAL A 200      59.938  32.637  10.295  1.00 23.01           C
ATOM   1550  CG1 VAL A 200      59.800  33.878   9.410  1.00 21.18           C
ATOM   1551  CG2 VAL A 200      61.410  32.392  10.656  1.00 17.44           C
ATOM   1552  N   VAL A 201      57.195  34.285  11.400  1.00 20.42           N
ATOM   1553  CA  VAL A 201      55.833  34.702  11.095  1.00 18.07           C
ATOM   1554  C   VAL A 201      55.907  35.741   9.974  1.00 19.18           C
ATOM   1555  O   VAL A 201      56.760  36.618  10.006  1.00 20.16           O
ATOM   1556  CB  VAL A 201      55.167  35.322  12.322  1.00 22.02           C
ATOM   1557  CG1 VAL A 201      53.748  35.743  11.987  1.00 23.57           C
ATOM   1558  CG2 VAL A 201      55.156  34.320  13.465  1.00 18.56           C
ATOM   1559  N   TRP A 202      55.050  35.599   8.961  1.00 18.54           N
ATOM   1560  CA  TRP A 202      55.014  36.508   7.809  1.00 21.04           C
ATOM   1561  C   TRP A 202      54.505  37.895   8.206  1.00 21.19           C
ATOM   1562  O   TRP A 202      53.571  38.007   8.997  1.00 24.85           O
ATOM   1563  CB  TRP A 202      54.083  35.969   6.717  1.00 20.52           C
ATOM   1564  CG  TRP A 202      54.452  34.663   6.062  1.00 21.23           C
ATOM   1565  CD1 TRP A 202      53.586  33.799   5.461  1.00 19.92           C
ATOM   1566  CD2 TRP A 202      55.767  34.122   5.850  1.00 22.43           C
ATOM   1567  NE1 TRP A 202      54.271  32.766   4.872  1.00 24.00           N
ATOM   1568  CE2 TRP A 202      55.609  32.934   5.093  1.00 21.42           C
ATOM   1569  CE3 TRP A 202      57.061  34.524   6.216  1.00 26.36           C
ATOM   1570  CZ2 TRP A 202      56.697  32.144   4.689  1.00 21.09           C
ATOM   1571  CZ3 TRP A 202      58.150  33.736   5.809  1.00 28.65           C
ATOM   1572  CH2 TRP A 202      57.957  32.560   5.053  1.00 24.15           C
ATOM   1573  N   GLY A 203      55.105  38.943   7.640  1.00 19.02           N
ATOM   1574  CA  GLY A 203      54.683  40.298   7.946  1.00 17.60           C
ATOM   1575  C   GLY A 203      55.570  40.999   8.962  1.00 21.54           C
ATOM   1576  O   GLY A 203      56.525  40.414   9.464  1.00 22.01           O
ATOM   1577  N   SER A 204      55.242  42.252   9.271  1.00 20.06           N
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ATOM   1578  CA  SER A 204      56.002  43.058  10.220  1.00 20.26           C
ATOM   1579  C   SER A 204      55.533  42.917  11.665  1.00 18.43           C
ATOM   1580  O   SER A 204      56.236  43.325  12.586  1.00 21.68           O
ATOM   1581  CB  SER A 204      55.914  44.528   9.827  1.00 18.68           C
ATOM   1582  OG  SER A 204      54.602  45.004  10.045  1.00 22.60           O
ATOM   1583  N   GLY A 205      54.335  42.373  11.856  1.00 20.31           N
ATOM   1584  CA  GLY A 205      53.776  42.212  13.186  1.00 16.50           C
ATOM   1585  C   GLY A 205      53.127  43.486  13.713  1.00 18.41           C
ATOM   1586  O   GLY A 205      52.585  43.500  14.813  1.00 18.71           O
ATOM   1587  N   THR A 206      53.160  44.559  12.928  1.00 18.88           N
ATOM   1588  CA  THR A 206      52.578  45.827  13.359  1.00 19.22           C
ATOM   1589  C   THR A 206      51.058  45.954  13.236  1.00 21.16           C
ATOM   1590  O   THR A 206      50.459  46.764  13.954  1.00 23.57           O
ATOM   1591  CB  THR A 206      53.206  47.031  12.629  1.00 17.78           C
ATOM   1592  OG1 THR A 206      52.919  46.934  11.236  1.00 18.73           O
ATOM   1593  CG2 THR A 206      54.704  47.056  12.814  1.00 13.34           C
ATOM   1594  N   PRO A 207      50.403  45.188  12.342  1.00 22.06           N
ATOM   1595  CA  PRO A 207      48.951  45.377  12.278  1.00 20.77           C
ATOM   1596  C   PRO A 207      48.187  45.027  13.555  1.00 21.26           C
ATOM   1597  O   PRO A 207      48.583  44.133  14.312  1.00 18.61           O
ATOM   1598  CB  PRO A 207      48.522  44.551  11.063  1.00 21.67           C
ATOM   1599  CG  PRO A 207      49.643  43.609  10.839  1.00 26.24           C
ATOM   1600  CD  PRO A 207      50.870  44.362  11.204  1.00 20.27           C
ATOM   1601  N   MET A 208      47.137  45.796  13.821  1.00 19.92           N
ATOM   1602  CA  MET A 208      46.326  45.591  15.010  1.00 23.77           C
ATOM   1603  C   MET A 208      45.003  44.850  14.771  1.00 24.02           C
ATOM   1604  O   MET A 208      44.283  45.134  13.821  1.00 26.66           O
ATOM   1605  CB  MET A 208      46.107  46.931  15.694  1.00 25.89           C
ATOM   1606  CG  MET A 208      47.425  47.574  16.097  1.00 30.42           C
ATOM   1607  SD  MET A 208      47.242  49.203  16.771  1.00 40.10           S
ATOM   1608  CE  MET A 208      47.178  50.159  15.247  1.00 32.43           C
ATOM   1609  N   ARG A 209      44.718  43.876  15.633  1.00 24.52           N
ATOM   1610  CA  ARG A 209      43.513  43.059  15.542  1.00 24.41           C
ATOM   1611  C   ARG A 209      42.817  42.948  16.893  1.00 23.05           C
ATOM   1612  O   ARG A 209      43.434  43.122  17.933  1.00 24.79           O
ATOM   1613  CB  ARG A 209      43.858  41.649  15.052  1.00 22.43           C
ATOM   1614  CG  ARG A 209      44.513  41.585  13.690  1.00 23.73           C
ATOM   1615  CD  ARG A 209      43.625  42.200  12.650  1.00 27.83           C
ATOM   1616  NE  ARG A 209      44.175  42.057  11.305  1.00 27.02           N
ATOM   1617  CZ  ARG A 209      44.635  43.061  10.563  1.00 29.49           C
ATOM   1618  NH1 ARG A 209      44.628  44.301  11.034  1.00 26.33           N
ATOM   1619  NH2 ARG A 209      45.074  42.829   9.332  1.00 29.09           N
ATOM   1620  N   GLU A 210      41.533  42.626  16.861  1.00 21.15           N
ATOM   1621  CA  GLU A 210      40.727  42.476  18.063  1.00 19.70           C
ATOM   1622  C   GLU A 210      40.312  41.012  18.193  1.00 20.76           C
ATOM   1623  O   GLU A 210      39.995  40.370  17.198  1.00 23.29           O
ATOM   1624  CB  GLU A 210      39.487  43.366  17.956  1.00 19.08           C
ATOM   1625  CG  GLU A 210      38.462  43.186  19.067  1.00 20.87           C
ATOM   1626  CD  GLU A 210      37.165  43.924  18.788  1.00 23.32           C
ATOM   1627  OE1 GLU A 210      36.842  44.115  17.601  1.00 25.01           O
ATOM   1628  OE2 GLU A 210      36.455  44.302  19.744  1.00 26.04           O
ATOM   1629  N   PHE A 211      40.318  40.489  19.416  1.00 17.24           N
ATOM   1630  CA  PHE A 211      39.954  39.101  19.668  1.00 22.39           C
ATOM   1631  C   PHE A 211      39.035  38.995  20.876  1.00 23.54           C
ATOM   1632  O   PHE A 211      39.218  39.693  21.866  1.00 30.03           O
ATOM   1633  CB  PHE A 211      41.207  38.256  19.912  1.00 20.49           C
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ATOM   1634  CG  PHE A 211      42.177  38.294  18.789  1.00 22.91           C
ATOM   1635  CD1 PHE A 211      41.999  37.482  17.674  1.00 26.09           C
ATOM   1636  CD2 PHE A 211      43.258  39.166  18.824  1.00 22.98           C
ATOM   1637  CE1 PHE A 211      42.893  37.543  16.596  1.00 27.04           C
ATOM   1638  CE2 PHE A 211      44.154  39.234  17.761  1.00 24.82           C
ATOM   1639  CZ  PHE A 211      43.968  38.418  16.641  1.00 22.53           C
ATOM   1640  N   LEU A 212      38.091  38.065  20.812  1.00 22.95           N
ATOM   1641  CA  LEU A 212      37.126  37.855  21.877  1.00 21.66           C
ATOM   1642  C   LEU A 212      37.012  36.359  22.141  1.00 21.98           C
ATOM   1643  O   LEU A 212      36.890  35.572  21.206  1.00 20.99           O
ATOM   1644  CB  LEU A 212      35.768  38.407  21.435  1.00 20.54           C
ATOM   1645  CG  LEU A 212      34.580  38.324  22.387  1.00 23.29           C
ATOM   1646  CD1 LEU A 212      34.758  39.348  23.496  1.00 24.57           C
ATOM   1647  CD2 LEU A 212      33.293  38.590  21.637  1.00 20.17           C
ATOM   1648  N   HIS A 213      37.107  35.955  23.403  1.00 20.41           N
ATOM   1649  CA  HIS A 213      36.987  34.539  23.724  1.00 21.59           C
ATOM   1650  C   HIS A 213      35.544  34.116  23.426  1.00 22.88           C
ATOM   1651  O   HIS A 213      34.598  34.877  23.631  1.00 21.20           O
ATOM   1652  CB  HIS A 213      37.353  34.280  25.192  1.00 24.92           C
ATOM   1653  CG  HIS A 213      37.454  32.824  25.544  1.00 22.71           C
ATOM   1654  ND1 HIS A 213      36.347  32.032  25.756  1.00 24.08           N
ATOM   1655  CD2 HIS A 213      38.529  32.018  25.708  1.00 24.24           C
ATOM   1656  CE1 HIS A 213      36.734  30.799  26.033  1.00 22.50           C
ATOM   1657  NE2 HIS A 213      38.053  30.764  26.011  1.00 28.21           N
ATOM   1658  N   VAL A 214      35.380  32.892  22.948  1.00 25.29           N
ATOM   1659  CA  VAL A 214      34.068  32.388  22.586  1.00 24.32           C
ATOM   1660  C   VAL A 214      33.054  32.338  23.734  1.00 27.48           C
ATOM   1661  O   VAL A 214      31.857  32.507  23.500  1.00 29.17           O
ATOM   1662  CB  VAL A 214      34.188  31.041  21.840  1.00 24.27           C
ATOM   1663  CG1 VAL A 214      34.477  29.893  22.805  1.00 21.64           C
ATOM   1664  CG2 VAL A 214      32.963  30.806  20.989  1.00 26.33           C
ATOM   1665  N   ASP A 215      33.523  32.151  24.971  1.00 29.18           N
ATOM   1666  CA  ASP A 215      32.617  32.112  26.122  1.00 25.73           C
ATOM   1667  C   ASP A 215      32.063  33.502  26.389  1.00 25.82           C
ATOM   1668  O   ASP A 215      30.919  33.645  26.804  1.00 28.17           O
ATOM   1669  CB  ASP A 215      33.303  31.551  27.369  1.00 22.58           C
ATOM   1670  CG  ASP A 215      33.530  30.054  27.286  1.00 25.39           C
ATOM   1671  OD1 ASP A 215      32.775  29.349  26.590  1.00 26.16           O
ATOM   1672  OD2 ASP A 215      34.477  29.568  27.916  1.00 31.88           O
ATOM   1673  N   ASP A 216      32.876  34.526  26.153  1.00 24.50           N
ATOM   1674  CA  ASP A 216      32.418  35.898  26.315  1.00 24.72           C
ATOM   1675  C   ASP A 216      31.373  36.150  25.220  1.00 27.00           C
ATOM   1676  O   ASP A 216      30.357  36.801  25.442  1.00 28.85           O
ATOM   1677  CB  ASP A 216      33.583  36.876  26.150  1.00 27.82           C
ATOM   1678  CG  ASP A 216      34.129  37.391  27.478  1.00 28.45           C
ATOM   1679  OD1 ASP A 216      33.442  37.299  28.520  1.00 30.92           O
ATOM   1680  OD2 ASP A 216      35.255  37.923  27.467  1.00 27.14           O
ATOM   1681  N   MET A 217      31.641  35.617  24.034  1.00 28.05           N
ATOM   1682  CA  MET A 217      30.746  35.741  22.894  1.00 27.95           C
ATOM   1683  C   MET A 217      29.363  35.200  23.261  1.00 26.79           C
ATOM   1684  O   MET A 217      28.358  35.888  23.082  1.00 27.99           O
ATOM   1685  CB  MET A 217      31.318  34.950  21.707  1.00 31.65           C
ATOM   1686  CG  MET A 217      30.358  34.744  20.539  1.00 34.58           C
ATOM   1687  SD  MET A 217      29.895  36.349  19.937  1.00 48.23           S
ATOM   1688  CE  MET A 217      28.361  35.953  19.139  1.00 54.42           C
ATOM   1689  N   ALA A 218      29.324  33.972  23.774  1.00 23.59           N
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ATOM   1690  CA  ALA A 218      28.076  33.320  24.167  1.00 23.88           C
ATOM   1691  C   ALA A 218      27.319  34.116  25.244  1.00 26.90           C
ATOM   1692  O   ALA A 218      26.091  34.244  25.197  1.00 27.66           O
ATOM   1693  CB  ALA A 218      28.362  31.908  24.646  1.00 18.18           C
ATOM   1694  N   ALA A 219      28.064  34.682  26.188  1.00 25.13           N
ATOM   1695  CA  ALA A 219      27.476  35.477  27.255  1.00 25.66           C
ATOM   1696  C   ALA A 219      26.787  36.703  26.667  1.00 27.39           C
ATOM   1697  O   ALA A 219      25.647  36.994  27.009  1.00 28.52           O
ATOM   1698  CB  ALA A 219      28.544  35.895  28.261  1.00 21.47           C
ATOM   1699  N   ALA A 220      27.472  37.406  25.768  1.00 28.63           N
ATOM   1700  CA  ALA A 220      26.920  38.604  25.131  1.00 26.33           C
ATOM   1701  C   ALA A 220      25.697  38.275  24.290  1.00 26.06           C
ATOM   1702  O   ALA A 220      24.741  39.043  24.235  1.00 29.42           O
ATOM   1703  CB  ALA A 220      27.968  39.276  24.268  1.00 22.04           C
ATOM   1704  N   SER A 221      25.737  37.124  23.636  1.00 24.40           N
ATOM   1705  CA  SER A 221      24.643  36.687  22.787  1.00 27.11           C
ATOM   1706  C   SER A 221      23.360  36.480  23.590  1.00 27.16           C
ATOM   1707  O   SER A 221      22.289  36.977  23.225  1.00 25.37           O
ATOM   1708  CB  SER A 221      25.046  35.393  22.082  1.00 22.88           C
ATOM   1709  OG  SER A 221      26.154  35.636  21.242  1.00 27.21           O
ATOM   1710  N   ILE A 222      23.489  35.704  24.664  1.00 28.09           N
ATOM   1711  CA  ILE A 222      22.400  35.395  25.575  1.00 26.58           C
ATOM   1712  C   ILE A 222      21.890  36.685  26.222  1.00 29.03           C
ATOM   1713  O   ILE A 222      20.688  36.860  26.402  1.00 33.57           O
ATOM   1714  CB  ILE A 222      22.876  34.390  26.633  1.00 27.12           C
ATOM   1715  CG1 ILE A 222      23.248  33.077  25.935  1.00 26.47           C
ATOM   1716  CG2 ILE A 222      21.796  34.154  27.684  1.00 27.52           C
ATOM   1717  CD1 ILE A 222      23.912  32.071  26.811  1.00 28.54           C
ATOM   1718  N   HIS A 223      22.799  37.610  26.512  1.00 27.80           N
ATOM   1719  CA  HIS A 223      22.428  38.886  27.103  1.00 26.97           C
ATOM   1720  C   HIS A 223      21.536  39.646  26.114  1.00 30.27           C
ATOM   1721  O   HIS A 223      20.440  40.088  26.471  1.00 29.90           O
ATOM   1722  CB  HIS A 223      23.686  39.695  27.418  1.00 22.45           C
ATOM   1723  CG  HIS A 223      23.411  41.076  27.929  1.00 25.76           C
ATOM   1724  ND1 HIS A 223      23.262  41.358  29.268  1.00 26.58           N
ATOM   1725  CD2 HIS A 223      23.293  42.259  27.279  1.00 23.25           C
ATOM   1726  CE1 HIS A 223      23.068  42.656  29.421  1.00 27.80           C
ATOM   1727  NE2 HIS A 223      23.082  43.226  28.230  1.00 24.79           N
ATOM   1728  N   VAL A 224      22.004  39.779  24.871  1.00 30.37           N
ATOM   1729  CA  VAL A 224      21.248  40.475  23.834  1.00 25.52           C
ATOM   1730  C   VAL A 224      19.917  39.777  23.557  1.00 25.58           C
ATOM   1731  O   VAL A 224      18.888  40.436  23.438  1.00 26.16           O
ATOM   1732  CB  VAL A 224      22.071  40.631  22.535  1.00 28.54           C
ATOM   1733  CG1 VAL A 224      21.192  41.185  21.395  1.00 25.39           C
ATOM   1734  CG2 VAL A 224      23.257  41.573  22.786  1.00 23.36           C
ATOM   1735  N   MET A 225      19.929  38.448  23.503  1.00 23.29           N
ATOM   1736  CA  MET A 225      18.708  37.683  23.276  1.00 25.45           C
ATOM   1737  C   MET A 225      17.645  37.960  24.357  1.00 30.79           C
ATOM   1738  O   MET A 225      16.484  38.221  24.049  1.00 31.70           O
ATOM   1739  CB  MET A 225      19.025  36.188  23.256  1.00 22.65           C
ATOM   1740  CG  MET A 225      17.808  35.290  23.177  1.00 22.09           C
ATOM   1741  SD  MET A 225      16.850  35.534  21.670  1.00 27.79           S
ATOM   1742  CE  MET A 225      16.726  33.888  21.053  1.00 19.59           C
ATOM   1743  N   GLU A 226      18.073  37.969  25.617  1.00 31.00           N
ATOM   1744  CA  GLU A 226      17.175  38.160  26.750  1.00 31.44           C
ATOM   1745  C   GLU A 226      16.810  39.568  27.196  1.00 31.94           C
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ATOM   1746  O   GLU A 226      15.976  39.731  28.076  1.00 35.03           O
ATOM   1747  CB  GLU A 226      17.662  37.321  27.922  1.00 28.92           C
ATOM   1748  CG  GLU A 226      17.559  35.848  27.602  1.00 32.28           C
ATOM   1749  CD  GLU A 226      18.113  34.955  28.676  1.00 36.44           C
ATOM   1750  OE1 GLU A 226      18.791  35.463  29.594  1.00 37.16           O
ATOM   1751  OE2 GLU A 226      17.871  33.735  28.588  1.00 36.59           O
ATOM   1752  N   LEU A 227      17.398  40.582  26.574  1.00 32.98           N
ATOM   1753  CA  LEU A 227      17.089  41.979  26.898  1.00 32.85           C
ATOM   1754  C   LEU A 227      15.600  42.252  26.631  1.00 35.35           C
ATOM   1755  O   LEU A 227      14.951  41.543  25.852  1.00 30.98           O
ATOM   1756  CB  LEU A 227      17.896  42.898  25.983  1.00 32.82           C
ATOM   1757  CG  LEU A 227      18.810  43.955  26.570  1.00 36.81           C
ATOM   1758  CD1 LEU A 227      19.758  43.308  27.546  1.00 42.67           C
ATOM   1759  CD2 LEU A 227      19.571  44.602  25.439  1.00 38.94           C
ATOM   1760  N   ALA A 228      15.068  43.300  27.250  1.00 37.77           N
ATOM   1761  CA  ALA A 228      13.665  43.661  27.044  1.00 38.56           C
ATOM   1762  C   ALA A 228      13.527  44.220  25.639  1.00 35.13           C
ATOM   1763  O   ALA A 228      14.351  45.031  25.210  1.00 34.44           O
ATOM   1764  CB  ALA A 228      13.217  44.710  28.071  1.00 36.59           C
ATOM   1765  N   HIS A 229      12.476  43.800  24.943  1.00 33.46           N
ATOM   1766  CA  HIS A 229      12.220  44.256  23.586  1.00 35.30           C
ATOM   1767  C   HIS A 229      12.268  45.773  23.473  1.00 34.25           C
ATOM   1768  O   HIS A 229      12.897  46.292  22.554  1.00 35.79           O
ATOM   1769  CB  HIS A 229      10.872  43.732  23.086  1.00 37.43           C
ATOM   1770  CG  HIS A 229      10.688  43.865  21.606  1.00 41.98           C
ATOM   1771  ND1 HIS A 229       9.507  44.289  21.036  1.00 44.45           N
ATOM   1772  CD2 HIS A 229      11.539  43.630  20.579  1.00 40.17           C
ATOM   1773  CE1 HIS A 229       9.640  44.307  19.721  1.00 43.12           C
ATOM   1774  NE2 HIS A 229      10.863  43.911  19.418  1.00 39.43           N
ATOM   1775  N   GLU A 230      11.679  46.476  24.447  1.00 34.52           N
ATOM   1776  CA  GLU A 230      11.656  47.944  24.436  1.00 36.01           C
ATOM   1777  C   GLU A 230      13.040  48.532  24.551  1.00 32.41           C
ATOM   1778  O   GLU A 230      13.309  49.587  23.975  1.00 33.66           O
ATOM   1779  CB  GLU A 230      10.810  48.522  25.572  1.00 43.87           C
ATOM   1780  CG  GLU A 230       9.507  47.805  25.834  1.00 59.23           C
ATOM   1781  CD  GLU A 230       9.475  47.156  27.211  1.00 67.02           C
ATOM   1782  OE1 GLU A 230      10.290  47.537  28.085  1.00 67.32           O
ATOM   1783  OE2 GLU A 230       8.623  46.269  27.421  1.00 72.93           O
ATOM   1784  N   VAL A 231      13.896  47.879  25.334  1.00 30.41           N
ATOM   1785  CA  VAL A 231      15.270  48.343  25.530  1.00 32.05           C
ATOM   1786  C   VAL A 231      16.087  48.154  24.258  1.00 31.22           C
ATOM   1787  O   VAL A 231      16.897  49.012  23.891  1.00 30.73           O
ATOM   1788  CB  VAL A 231      15.957  47.600  26.701  1.00 34.26           C
ATOM   1789  CG1 VAL A 231      17.415  48.047  26.836  1.00 34.42           C
ATOM   1790  CG2 VAL A 231      15.201  47.872  27.999  1.00 33.56           C
ATOM   1791  N   TRP A 232      15.860  47.025  23.592  1.00 28.92           N
ATOM   1792  CA  TRP A 232      16.545  46.706  22.347  1.00 28.47           C
ATOM   1793  C   TRP A 232      16.110  47.667  21.241  1.00 28.71           C
ATOM   1794  O   TRP A 232      16.947  48.245  20.556  1.00 28.50           O
ATOM   1795  CB  TRP A 232      16.243  45.269  21.945  1.00 26.62           C
ATOM   1796  CG  TRP A 232      16.898  44.855  20.666  1.00 32.32           C
ATOM   1797  CD1 TRP A 232      18.198  44.477  20.499  1.00 31.35           C
ATOM   1798  CD2 TRP A 232      16.278  44.740  19.377  1.00 33.29           C
ATOM   1799  NE1 TRP A 232      18.427  44.128  19.191  1.00 31.77           N
ATOM   1800  CE2 TRP A 232      17.267  44.279  18.480  1.00 30.84           C
ATOM   1801  CE3 TRP A 232      14.985  44.976  18.894  1.00 30.74           C
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ATOM   1802  CZ2 TRP A 232      17.004  44.049  17.132  1.00 26.46           C
ATOM   1803  CZ3 TRP A 232      14.726  44.746  17.551  1.00 30.51           C
ATOM   1804  CH2 TRP A 232      15.732  44.289  16.687  1.00 29.05           C
ATOM   1805  N   LEU A 233      14.799  47.869  21.105  1.00 27.99           N
ATOM   1806  CA  LEU A 233      14.261  48.765  20.084  1.00 28.27           C
ATOM   1807  C   LEU A 233      14.795  50.165  20.263  1.00 28.89           C
ATOM   1808  O   LEU A 233      15.031  50.881  19.294  1.00 30.72           O
ATOM   1809  CB  LEU A 233      12.739  48.810  20.165  1.00 28.76           C
ATOM   1810  CG  LEU A 233      11.984  47.546  19.771  1.00 29.00           C
ATOM   1811  CD1 LEU A 233      10.530  47.694  20.179  1.00 31.26           C
ATOM   1812  CD2 LEU A 233      12.120  47.310  18.264  1.00 27.84           C
ATOM   1813  N   GLU A 234      15.000  50.534  21.520  1.00 31.87           N
ATOM   1814  CA  GLU A 234      15.488  51.851  21.892  1.00 35.22           C
ATOM   1815  C   GLU A 234      16.942  52.068  21.517  1.00 33.59           C
ATOM   1816  O   GLU A 234      17.353  53.199  21.263  1.00 33.78           O
ATOM   1817  CB  GLU A 234      15.313  52.041  23.393  1.00 41.45           C
ATOM   1818  CG  GLU A 234      15.650  53.417  23.913  1.00 51.75           C
ATOM   1819  CD  GLU A 234      15.827  53.407  25.422  1.00 63.38           C
ATOM   1820  OE1 GLU A 234      14.937  52.869  26.127  1.00 65.94           O
ATOM   1821  OE2 GLU A 234      16.868  53.912  25.904  1.00 67.45           O
ATOM   1822  N   ASN A 235      17.722  50.990  21.486  1.00 34.46           N
ATOM   1823  CA  ASN A 235      19.140  51.097  21.143  1.00 35.66           C
ATOM   1824  C   ASN A 235      19.519  50.670  19.736  1.00 34.77           C
ATOM   1825  O   ASN A 235      20.703  50.588  19.419  1.00 35.60           O
ATOM   1826  CB  ASN A 235      19.998  50.346  22.155  1.00 38.20           C
ATOM   1827  CG  ASN A 235      20.061  51.050  23.488  1.00 40.47           C
ATOM   1828  OD1 ASN A 235      19.230  50.804  24.361  1.00 41.70           O
ATOM   1829  ND2 ASN A 235      21.031  51.950  23.646  1.00 38.15           N
ATOM   1830  N   THR A 236      18.515  50.375  18.911  1.00 30.16           N
ATOM   1831  CA  THR A 236      18.730  49.974  17.530  1.00 26.96           C
ATOM   1832  C   THR A 236      17.725  50.686  16.633  1.00 29.34           C
ATOM   1833  O   THR A 236      16.907  51.483  17.097  1.00 30.40           O
ATOM   1834  CB  THR A 236      18.505  48.471  17.342  1.00 26.06           C
ATOM   1835  OG1 THR A 236      17.168  48.153  17.718  1.00 23.36           O
ATOM   1836  CG2 THR A 236      19.466  47.652  18.190  1.00 23.68           C
ATOM   1837  N   GLN A 237      17.823  50.407  15.337  1.00 31.04           N
ATOM   1838  CA  GLN A 237      16.926  50.946  14.319  1.00 29.74           C
ATOM   1839  C   GLN A 237      16.418  49.747  13.538  1.00 30.35           C
ATOM   1840  O   GLN A 237      17.120  48.751  13.400  1.00 31.24           O
ATOM   1841  CB  GLN A 237      17.663  51.881  13.372  1.00 30.60           C
ATOM   1842  CG  GLN A 237      17.872  53.258  13.921  1.00 39.45           C
ATOM   1843  CD  GLN A 237      19.275  53.730  13.684  1.00 47.84           C
ATOM   1844  OE1 GLN A 237      20.210  53.269  14.346  1.00 53.55           O
ATOM   1845  NE2 GLN A 237      19.449  54.627  12.716  1.00 51.18           N
ATOM   1846  N   PRO A 238      15.192  49.828  13.007  1.00 31.11           N
ATOM   1847  CA  PRO A 238      14.588  48.735  12.241  1.00 28.16           C
ATOM   1848  C   PRO A 238      15.425  48.238  11.068  1.00 26.63           C
ATOM   1849  O   PRO A 238      15.412  47.046  10.759  1.00 28.16           O
ATOM   1850  CB  PRO A 238      13.268  49.344  11.772  1.00 30.93           C
ATOM   1851  CG  PRO A 238      12.920  50.271  12.896  1.00 31.77           C
ATOM   1852  CD  PRO A 238      14.250  50.954  13.130  1.00 32.36           C
ATOM   1853  N   MET A 239      16.143  49.146  10.420  1.00 21.38           N
ATOM   1854  CA  MET A 239      16.970  48.769   9.286  1.00 22.28           C
ATOM   1855  C   MET A 239      18.477  48.877   9.557  1.00 21.75           C
ATOM   1856  O   MET A 239      19.291  48.895   8.640  1.00 22.74           O
ATOM   1857  CB  MET A 239      16.541  49.554   8.043  1.00 21.13           C
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ATOM   1858  CG  MET A 239      15.111  49.224   7.604  1.00 22.76           C
ATOM   1859  SD  MET A 239      14.537  50.176   6.188  1.00 26.50           S
ATOM   1860  CE  MET A 239      15.085  49.154   4.844  1.00 25.86           C
ATOM   1861  N   LEU A 240      18.834  48.942  10.834  1.00 19.60           N
ATOM   1862  CA  LEU A 240      20.230  48.977  11.274  1.00 19.53           C
ATOM   1863  C   LEU A 240      20.133  48.406  12.688  1.00 20.93           C
ATOM   1864  O   LEU A 240      20.394  49.087  13.677  1.00 20.84           O
ATOM   1865  CB  LEU A 240      20.776  50.402  11.292  1.00 18.18           C
ATOM   1866  CG  LEU A 240      22.305  50.452  11.328  1.00 20.72           C
ATOM   1867  CD1 LEU A 240      22.870  49.885  10.042  1.00 22.42           C
ATOM   1868  CD2 LEU A 240      22.781  51.876  11.512  1.00 25.43           C
ATOM   1869  N   SER A 241      19.733  47.139  12.751  1.00 19.97           N
ATOM   1870  CA  SER A 241      19.482  46.445  14.010  1.00 22.45           C
ATOM   1871  C   SER A 241      20.555  45.547  14.632  1.00 24.03           C
ATOM   1872  O   SER A 241      20.392  45.097  15.770  1.00 22.71           O
ATOM   1873  CB  SER A 241      18.220  45.613  13.841  1.00 21.78           C
ATOM   1874  OG  SER A 241      18.449  44.574  12.905  1.00 20.80           O
ATOM   1875  N   HIS A 242      21.610  45.230  13.886  1.00 21.94           N
ATOM   1876  CA  HIS A 242      22.649  44.354  14.412  1.00 20.43           C
ATOM   1877  C   HIS A 242      23.469  45.046  15.496  1.00 22.84           C
ATOM   1878  O   HIS A 242      23.560  46.274  15.538  1.00 21.58           O
ATOM   1879  CB  HIS A 242      23.549  43.829  13.275  1.00 18.89           C
ATOM   1880  CG  HIS A 242      24.214  44.906  12.474  1.00 20.76           C
ATOM   1881  ND1 HIS A 242      25.571  45.149  12.534  1.00 23.65           N
ATOM   1882  CD2 HIS A 242      23.709  45.818  11.608  1.00 18.12           C
ATOM   1883  CE1 HIS A 242      25.872  46.164  11.744  1.00 20.15           C
ATOM   1884  NE2 HIS A 242      24.760  46.589  11.171  1.00 22.79           N
ATOM   1885  N   ILE A 243      24.044  44.249  16.388  1.00 24.70           N
ATOM   1886  CA  ILE A 243      24.866  44.776  17.472  1.00 26.04           C
ATOM   1887  C   ILE A 243      26.266  44.156  17.428  1.00 24.14           C
ATOM   1888  O   ILE A 243      26.403  42.933  17.412  1.00 22.35           O
ATOM   1889  CB  ILE A 243      24.208  44.483  18.849  1.00 24.66           C
ATOM   1890  CG1 ILE A 243      22.893  45.247  18.969  1.00 26.58           C
ATOM   1891  CG2 ILE A 243      25.136  44.865  19.995  1.00 20.76           C
ATOM   1892  CD1 ILE A 243      22.010  44.740  20.080  1.00 31.07           C
ATOM   1893  N   ASN A 244      27.290  45.006  17.366  1.00 22.22           N
ATOM   1894  CA  ASN A 244      28.683  44.552  17.352  1.00 22.94           C
ATOM   1895  C   ASN A 244      29.025  43.910  18.697  1.00 23.29           C
ATOM   1896  O   ASN A 244      28.664  44.443  19.752  1.00 23.18           O
ATOM   1897  CB  ASN A 244      29.645  45.728  17.121  1.00 18.05           C
ATOM   1898  CG  ASN A 244      29.676  46.200  15.672  1.00 20.70           C
ATOM   1899  OD1 ASN A 244      29.297  45.469  14.749  1.00 20.93           O
ATOM   1900  ND2 ASN A 244      30.132  47.431  15.467  1.00 18.91           N
ATOM   1901  N   VAL A 245      29.707  42.771  18.661  1.00 20.63           N
ATOM   1902  CA  VAL A 245      30.113  42.090  19.887  1.00 23.48           C
ATOM   1903  C   VAL A 245      31.636  41.899  19.841  1.00 24.52           C
ATOM   1904  O   VAL A 245      32.168  41.242  18.940  1.00 22.64           O
ATOM   1905  CB  VAL A 245      29.404  40.721  20.041  1.00 26.10           C
ATOM   1906  CG1 VAL A 245      29.826  40.037  21.324  1.00 25.67           C
ATOM   1907  CG2 VAL A 245      27.911  40.907  20.044  1.00 27.12           C
ATOM   1908  N   GLY A 246      32.332  42.531  20.782  1.00 24.92           N
ATOM   1909  CA  GLY A 246      33.783  42.426  20.845  1.00 25.16           C
ATOM   1910  C   GLY A 246      34.321  43.079  22.099  1.00 27.04           C
ATOM   1911  O   GLY A 246      33.554  43.369  23.015  1.00 27.15           O
ATOM   1912  N   THR A 247      35.627  43.327  22.139  1.00 28.23           N
ATOM   1913  CA  THR A 247      36.264  43.955  23.302  1.00 29.64           C
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ATOM   1914  C   THR A 247      36.510  45.454  23.122  1.00 29.69           C
ATOM   1915  O   THR A 247      36.592  46.197  24.101  1.00 30.93           O
ATOM   1916  CB  THR A 247      37.632  43.316  23.630  1.00 26.94           C
ATOM   1917  OG1 THR A 247      38.538  43.559  22.551  1.00 30.49           O
ATOM   1918  CG2 THR A 247      37.504  41.821  23.854  1.00 24.99           C
ATOM   1919  N   GLY A 248      36.648  45.886  21.871  1.00 30.62           N
ATOM   1920  CA  GLY A 248      36.909  47.286  21.582  1.00 30.96           C
ATOM   1921  C   GLY A 248      38.374  47.626  21.791  1.00 32.37           C
ATOM   1922  O   GLY A 248      38.792  48.774  21.659  1.00 33.15           O
ATOM   1923  N   VAL A 249      39.149  46.606  22.146  1.00 36.38           N
ATOM   1924  CA  VAL A 249      40.582  46.733  22.400  1.00 35.32           C
ATOM   1925  C   VAL A 249      41.340  46.000  21.305  1.00 33.54           C
ATOM   1926  O   VAL A 249      40.995  44.878  20.943  1.00 31.55           O
ATOM   1927  CB  VAL A 249      40.955  46.095  23.771  1.00 33.49           C
ATOM   1928  CG1 VAL A 249      42.453  46.009  23.945  1.00 37.03           C
ATOM   1929  CG2 VAL A 249      40.357  46.902  24.895  1.00 34.03           C
ATOM   1930  N   ASP A 250      42.340  46.657  20.740  1.00 33.09           N
ATOM   1931  CA  ASP A 250      43.141  46.018  19.716  1.00 34.83           C
ATOM   1932  C   ASP A 250      44.589  45.855  20.191  1.00 35.91           C
ATOM   1933  O   ASP A 250      45.036  46.520  21.137  1.00 35.51           O
ATOM   1934  CB  ASP A 250      43.058  46.774  18.374  1.00 37.89           C
ATOM   1935  CG  ASP A 250      43.441  48.252  18.483  1.00 40.50           C
ATOM   1936  OD1 ASP A 250      43.832  48.728  19.574  1.00 48.18           O
ATOM   1937  OD2 ASP A 250      43.351  48.946  17.451  1.00 39.51           O
ATOM   1938  N   CYS A 251      45.279  44.887  19.604  1.00 32.14           N
ATOM   1939  CA  CYS A 251      46.663  44.646  19.937  1.00 33.38           C
ATOM   1940  C   CYS A 251      47.359  44.192  18.660  1.00 29.54           C
ATOM   1941  O   CYS A 251      46.714  43.673  17.743  1.00 28.68           O
ATOM   1942  CB  CYS A 251      46.786  43.620  21.084  1.00 39.91           C
ATOM   1943  SG  CYS A 251      46.610  41.850  20.646  1.00 45.50           S
ATOM   1944  N   THR A 252      48.663  44.436  18.579  1.00 26.23           N
ATOM   1945  CA  THR A 252      49.445  44.067  17.408  1.00 20.12           C
ATOM   1946  C   THR A 252      49.635  42.562  17.291  1.00 18.00           C
ATOM   1947  O   THR A 252      49.530  41.824  18.274  1.00 19.25           O
ATOM   1948  CB  THR A 252      50.828  44.741  17.442  1.00 16.17           C
ATOM   1949  OG1 THR A 252      51.564  44.266  18.570  1.00 19.37           O
ATOM   1950  CG2 THR A 252      50.680  46.242  17.586  1.00 14.17           C
ATOM   1951  N   ILE A 253      49.890  42.102  16.074  1.00 18.88           N
ATOM   1952  CA  ILE A 253      50.136  40.681  15.851  1.00 19.06           C
ATOM   1953  C   ILE A 253      51.410  40.305  16.638  1.00 21.49           C
ATOM   1954  O   ILE A 253      51.523  39.203  17.182  1.00 24.79           O
ATOM   1955  CB  ILE A 253      50.334  40.364  14.341  1.00 17.20           C
ATOM   1956  CG1 ILE A 253      49.093  40.770  13.544  1.00 18.22           C
ATOM   1957  CG2 ILE A 253      50.630  38.885  14.141  1.00 16.36           C
ATOM   1958  CD1 ILE A 253      47.819  40.175  14.070  1.00 21.43           C
ATOM   1959  N   ARG A 254      52.358  41.232  16.701  1.00 18.63           N
ATOM   1960  CA  ARG A 254      53.595  41.014  17.436  1.00 20.59           C
ATOM   1961  C   ARG A 254      53.270  40.696  18.902  1.00 18.08           C
ATOM   1962  O   ARG A 254      53.756  39.713  19.460  1.00 16.09           O
ATOM   1963  CB  ARG A 254      54.483  42.259  17.292  1.00 18.77           C
ATOM   1964  CG  ARG A 254      55.407  42.576  18.445  1.00 24.60           C
ATOM   1965  CD  ARG A 254      56.791  42.026  18.283  1.00 26.66           C
ATOM   1966  NE  ARG A 254      57.452  42.471  17.062  1.00 26.45           N
ATOM   1967  CZ  ARG A 254      58.610  41.972  16.629  1.00 26.86           C
ATOM   1968  NH1 ARG A 254      59.249  41.044  17.331  1.00 22.35           N
ATOM   1969  NH2 ARG A 254      59.050  42.277  15.419  1.00 26.14           N
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ATOM   1970  N   GLU A 255      52.408  41.502  19.511  1.00 18.24           N
ATOM   1971  CA  GLU A 255      52.031  41.274  20.903  1.00 17.68           C
ATOM   1972  C   GLU A 255      51.314  39.946  21.076  1.00 19.71           C
ATOM   1973  O   GLU A 255      51.495  39.261  22.086  1.00 19.72           O
ATOM   1974  CB  GLU A 255      51.137  42.391  21.415  1.00 18.51           C
ATOM   1975  CG  GLU A 255      50.609  42.107  22.805  1.00 29.56           C
ATOM   1976  CD  GLU A 255      50.037  43.325  23.499  1.00 35.94           C
ATOM   1977  OE1 GLU A 255      49.923  44.403  22.876  1.00 40.53           O
ATOM   1978  OE2 GLU A 255      49.707  43.201  24.691  1.00 41.94           O
ATOM   1979  N   LEU A 256      50.478  39.605  20.095  1.00 19.97           N
ATOM   1980  CA  LEU A 256      49.724  38.353  20.103  1.00 18.75           C
ATOM   1981  C   LEU A 256      50.657  37.147  20.057  1.00 18.16           C
ATOM   1982  O   LEU A 256      50.549  36.238  20.890  1.00 21.01           O
ATOM   1983  CB  LEU A 256      48.761  38.293  18.911  1.00 17.32           C
ATOM   1984  CG  LEU A 256      48.004  36.970  18.773  1.00 20.22           C
ATOM   1985  CD1 LEU A 256      47.028  36.809  19.933  1.00 18.99           C
ATOM   1986  CD2 LEU A 256      47.280  36.906  17.445  1.00 19.35           C
ATOM   1987  N   ALA A 257      51.580  37.145  19.096  1.00 16.61           N
ATOM   1988  CA  ALA A 257      52.532  36.040  18.952  1.00 18.93           C
ATOM   1989  C   ALA A 257      53.423  35.862  20.192  1.00 17.74           C
ATOM   1990  O   ALA A 257      53.717  34.747  20.618  1.00 20.77           O
ATOM   1991  CB  ALA A 257      53.392  36.264  17.714  1.00 16.15           C
ATOM   1992  N   GLN A 258      53.854  36.986  20.750  1.00 18.00           N
ATOM   1993  CA  GLN A 258      54.708  37.023  21.920  1.00 17.43           C
ATOM   1994  C   GLN A 258      53.964  36.482  23.145  1.00 18.74           C
ATOM   1995  O   GLN A 258      54.546  35.790  23.979  1.00 16.90           O
ATOM   1996  CB  GLN A 258      55.141  38.470  22.137  1.00 22.50           C
ATOM   1997  CG  GLN A 258      56.618  38.703  22.293  1.00 29.19           C
ATOM   1998  CD  GLN A 258      57.483  38.060  21.215  1.00 28.88           C
ATOM   1999  OE1 GLN A 258      57.619  38.570  20.089  1.00 26.65           O
ATOM   2000  NE2 GLN A 258      58.145  36.975  21.591  1.00 26.16           N
ATOM   2001  N   THR A 259      52.674  36.788  23.247  1.00 18.84           N
ATOM   2002  CA  THR A 259      51.866  36.310  24.371  1.00 19.96           C
ATOM   2003  C   THR A 259      51.625  34.797  24.249  1.00 21.48           C
ATOM   2004  O   THR A 259      51.663  34.071  25.238  1.00 24.00           O
ATOM   2005  CB  THR A 259      50.526  37.071  24.460  1.00 18.93           C
ATOM   2006  OG1 THR A 259      50.788  38.471  24.620  1.00 21.13           O
ATOM   2007  CG2 THR A 259      49.702  36.591  25.643  1.00 14.80           C
ATOM   2008  N   ILE A 260      51.391  34.328  23.027  1.00 20.24           N
ATOM   2009  CA  ILE A 260      51.183  32.910  22.788  1.00 19.18           C
ATOM   2010  C   ILE A 260      52.468  32.158  23.122  1.00 18.14           C
ATOM   2011  O   ILE A 260      52.420  31.129  23.779  1.00 21.69           O
ATOM   2012  CB  ILE A 260      50.763  32.645  21.330  1.00 19.66           C
ATOM   2013  CG1 ILE A 260      49.334  33.128  21.125  1.00 21.57           C
ATOM   2014  CG2 ILE A 260      50.871  31.166  20.989  1.00 18.63           C
ATOM   2015  CD1 ILE A 260      48.835  32.980  19.697  1.00 22.20           C
ATOM   2016  N   ALA A 261      53.612  32.697  22.708  1.00 15.71           N
ATOM   2017  CA  ALA A 261      54.899  32.077  22.994  1.00 15.38           C
ATOM   2018  C   ALA A 261      55.047  31.871  24.497  1.00 18.87           C
ATOM   2019  O   ALA A 261      55.446  30.801  24.952  1.00 20.75           O
ATOM   2020  CB  ALA A 261      56.031  32.952  22.484  1.00 13.67           C
ATOM   2021  N   LYS A 262      54.714  32.901  25.268  1.00 19.35           N
ATOM   2022  CA  LYS A 262      54.811  32.837  26.720  1.00 18.69           C
ATOM   2023  C   LYS A 262      53.850  31.793  27.304  1.00 22.28           C
ATOM   2024  O   LYS A 262      54.256  30.957  28.106  1.00 22.87           O
ATOM   2025  CB  LYS A 262      54.534  34.219  27.306  1.00 21.11           C
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ATOM   2026  CG  LYS A 262      54.458  34.266  28.817  1.00 27.76           C
ATOM   2027  CD  LYS A 262      53.851  35.585  29.236  1.00 40.89           C
ATOM   2028  CE  LYS A 262      53.518  35.633  30.718  1.00 47.24           C
ATOM   2029  NZ  LYS A 262      52.872  36.944  31.071  1.00 52.28           N
ATOM   2030  N   VAL A 263      52.588  31.836  26.880  1.00 19.73           N
ATOM   2031  CA  VAL A 263      51.560  30.910  27.339  1.00 18.74           C
ATOM   2032  C   VAL A 263      51.954  29.450  27.099  1.00 19.90           C
ATOM   2033  O   VAL A 263      51.729  28.578  27.927  1.00 19.46           O
ATOM   2034  CB  VAL A 263      50.193  31.216  26.629  1.00 19.17           C
ATOM   2035  CG1 VAL A 263      49.216  30.064  26.797  1.00 16.58           C
ATOM   2036  CG2 VAL A 263      49.582  32.489  27.194  1.00 16.33           C
ATOM   2037  N   VAL A 264      52.549  29.196  25.950  1.00 20.17           N
ATOM   2038  CA  VAL A 264      52.946  27.854  25.580  1.00 21.61           C
ATOM   2039  C   VAL A 264      54.270  27.409  26.217  1.00 22.41           C
ATOM   2040  O   VAL A 264      54.546  26.219  26.320  1.00 23.33           O
ATOM   2041  CB  VAL A 264      52.959  27.748  24.042  1.00 21.07           C
ATOM   2042  CG1 VAL A 264      53.697  26.520  23.576  1.00 28.45           C
ATOM   2043  CG2 VAL A 264      51.519  27.716  23.540  1.00 21.57           C
ATOM   2044  N   GLY A 265      55.047  28.369  26.703  1.00 21.19           N
ATOM   2045  CA  GLY A 265      56.318  28.049  27.311  1.00 22.99           C
ATOM   2046  C   GLY A 265      57.432  27.916  26.293  1.00 26.31           C
ATOM   2047  O   GLY A 265      58.414  27.213  26.533  1.00 26.43           O
ATOM   2048  N   TYR A 266      57.284  28.595  25.156  1.00 26.16           N
ATOM   2049  CA  TYR A 266      58.284  28.561  24.089  1.00 25.67           C
ATOM   2050  C   TYR A 266      59.484  29.431  24.458  1.00 26.14           C
ATOM   2051  O   TYR A 266      59.319  30.596  24.830  1.00 24.41           O
ATOM   2052  CB  TYR A 266      57.674  29.040  22.770  1.00 22.56           C
ATOM   2053  CG  TYR A 266      58.650  29.033  21.621  1.00 21.11           C
ATOM   2054  CD1 TYR A 266      59.283  27.852  21.232  1.00 21.85           C
ATOM   2055  CD2 TYR A 266      58.939  30.202  20.921  1.00 18.65           C
ATOM   2056  CE1 TYR A 266      60.182  27.831  20.171  1.00 20.67           C
ATOM   2057  CE2 TYR A 266      59.833  30.195  19.858  1.00 17.69           C
ATOM   2058  CZ  TYR A 266      60.451  29.003  19.488  1.00 22.92           C
ATOM   2059  OH  TYR A 266      61.340  28.987  18.436  1.00 23.78           O
ATOM   2060  N   LYS A 267      60.686  28.867  24.341  1.00 26.35           N
ATOM   2061  CA  LYS A 267      61.902  29.595  24.692  1.00 29.12           C
ATOM   2062  C   LYS A 267      62.692  30.110  23.497  1.00 29.57           C
ATOM   2063  O   LYS A 267      63.712  30.782  23.669  1.00 33.12           O
ATOM   2064  CB  LYS A 267      62.822  28.725  25.547  1.00 31.01           C
ATOM   2065  CG  LYS A 267      62.250  28.279  26.867  1.00 32.15           C
ATOM   2066  CD  LYS A 267      62.126  29.399  27.827  1.00 28.52           C
ATOM   2067  CE  LYS A 267      61.836  28.839  29.184  1.00 32.12           C
ATOM   2068  NZ  LYS A 267      61.658  29.961  30.135  1.00 43.48           N
ATOM   2069  N   GLY A 268      62.248  29.781  22.291  1.00 27.39           N
ATOM   2070  CA  GLY A 268      62.946  30.249  21.109  1.00 22.49           C
ATOM   2071  C   GLY A 268      62.701  31.717  20.804  1.00 25.67           C
ATOM   2072  O   GLY A 268      62.228  32.489  21.649  1.00 24.71           O
ATOM   2073  N   ARG A 269      63.042  32.101  19.581  1.00 23.49           N
ATOM   2074  CA  ARG A 269      62.877  33.463  19.125  1.00 25.45           C
ATOM   2075  C   ARG A 269      61.688  33.578  18.195  1.00 23.36           C
ATOM   2076  O   ARG A 269      61.454  32.694  17.395  1.00 22.25           O
ATOM   2077  CB  ARG A 269      64.141  33.924  18.399  1.00 27.98           C
ATOM   2078  CG  ARG A 269      65.204  34.490  19.336  1.00 37.33           C
ATOM   2079  CD  ARG A 269      66.028  35.573  18.640  1.00 50.00           C
ATOM   2080  NE  ARG A 269      65.196  36.554  17.927  1.00 58.45           N
ATOM   2081  CZ  ARG A 269      64.339  37.406  18.502  1.00 61.03           C
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ATOM   2082  NH1 ARG A 269      64.199  37.451  19.831  1.00 60.31           N
ATOM   2083  NH2 ARG A 269      63.633  38.239  17.739  1.00 55.06           N
ATOM   2084  N   VAL A 270      60.893  34.627  18.368  1.00 23.48           N
ATOM   2085  CA  VAL A 270      59.746  34.876  17.503  1.00 24.73           C
ATOM   2086  C   VAL A 270      60.283  35.868  16.474  1.00 23.93           C
ATOM   2087  O   VAL A 270      60.743  36.942  16.823  1.00 25.70           O
ATOM   2088  CB  VAL A 270      58.552  35.505  18.273  1.00 28.14           C
ATOM   2089  CG1 VAL A 270      57.440  35.920  17.289  1.00 23.60           C
ATOM   2090  CG2 VAL A 270      58.002  34.508  19.302  1.00 21.32           C
ATOM   2091  N   VAL A 271      60.262  35.490  15.209  1.00 24.64           N
ATOM   2092  CA  VAL A 271      60.791  36.351  14.164  1.00 23.81           C
ATOM   2093  C   VAL A 271      59.733  36.735  13.141  1.00 25.29           C
ATOM   2094  O   VAL A 271      59.010  35.880  12.628  1.00 26.71           O
ATOM   2095  CB  VAL A 271      61.970  35.646  13.427  1.00 24.86           C
ATOM   2096  CG1 VAL A 271      62.560  36.550  12.338  1.00 24.28           C
ATOM   2097  CG2 VAL A 271      63.043  35.232  14.430  1.00 18.87           C
ATOM   2098  N   PHE A 272      59.635  38.030  12.868  1.00 24.78           N
ATOM   2099  CA  PHE A 272      58.700  38.526  11.873  1.00 21.88           C
ATOM   2100  C   PHE A 272      59.458  38.839  10.611  1.00 22.47           C
ATOM   2101  O   PHE A 272      60.433  39.583  10.646  1.00 25.92           O
ATOM   2102  CB  PHE A 272      57.970  39.760  12.375  1.00 16.75           C
ATOM   2103  CG  PHE A 272      56.823  39.430  13.247  1.00 18.44           C
ATOM   2104  CD1 PHE A 272      57.003  39.244  14.604  1.00 16.82           C
ATOM   2105  CD2 PHE A 272      55.568  39.219  12.699  1.00 19.11           C
ATOM   2106  CE1 PHE A 272      55.950  38.841  15.410  1.00 18.11           C
ATOM   2107  CE2 PHE A 272      54.509  38.820  13.495  1.00 21.54           C
ATOM   2108  CZ  PHE A 272      54.703  38.627  14.859  1.00 21.75           C
ATOM   2109  N   ASP A 273      59.046  38.209   9.516  1.00 21.79           N
ATOM   2110  CA  ASP A 273      59.665  38.408   8.209  1.00 21.33           C
ATOM   2111  C   ASP A 273      58.919  39.536   7.495  1.00 22.58           C
ATOM   2112  O   ASP A 273      57.858  39.321   6.912  1.00 23.12           O
ATOM   2113  CB  ASP A 273      59.588  37.110   7.404  1.00 23.56           C
ATOM   2114  CG  ASP A 273      60.322  37.195   6.073  1.00 26.62           C
ATOM   2115  OD1 ASP A 273      60.617  38.311   5.601  1.00 26.82           O
ATOM   2116  OD2 ASP A 273      60.585  36.133   5.479  1.00 31.47           O
ATOM   2117  N   ALA A 274      59.491  40.733   7.544  1.00 23.28           N
ATOM   2118  CA  ALA A 274      58.892  41.925   6.947  1.00 24.30           C
ATOM   2119  C   ALA A 274      58.966  42.014   5.428  1.00 24.53           C
ATOM   2120  O   ALA A 274      58.537  43.006   4.855  1.00 25.68           O
ATOM   2121  CB  ALA A 274      59.496  43.185   7.573  1.00 23.31           C
ATOM   2122  N   SER A 275      59.559  41.016   4.777  1.00 26.28           N
ATOM   2123  CA  SER A 275      59.622  41.024   3.320  1.00 26.39           C
ATOM   2124  C   SER A 275      58.262  40.569   2.770  1.00 26.23           C
ATOM   2125  O   SER A 275      58.026  40.623   1.574  1.00 30.79           O
ATOM   2126  CB  SER A 275      60.738  40.113   2.810  1.00 25.77           C
ATOM   2127  OG  SER A 275      60.385  38.749   2.939  1.00 25.48           O
ATOM   2128  N   LYS A 276      57.383  40.116   3.661  1.00 22.89           N
ATOM   2129  CA  LYS A 276      56.044  39.676   3.294  1.00 21.93           C
ATOM   2130  C   LYS A 276      55.085  40.798   3.665  1.00 23.43           C
ATOM   2131  O   LYS A 276      55.282  41.479   4.659  1.00 23.28           O
ATOM   2132  CB  LYS A 276      55.674  38.417   4.061  1.00 18.50           C
ATOM   2133  CG  LYS A 276      56.666  37.305   3.890  1.00 21.12           C
ATOM   2134  CD  LYS A 276      56.527  36.679   2.547  1.00 21.58           C
ATOM   2135  CE  LYS A 276      57.417  35.476   2.418  1.00 19.40           C
ATOM   2136  NZ  LYS A 276      57.255  34.933   1.048  1.00 22.07           N
ATOM   2137  N   PRO A 277      54.016  40.990   2.879  1.00 27.76           N
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ATOM   2138  CA  PRO A 277      53.017  42.038   3.117  1.00 23.84           C
ATOM   2139  C   PRO A 277      52.118  41.826   4.324  1.00 24.51           C
ATOM   2140  O   PRO A 277      51.924  40.704   4.793  1.00 24.47           O
ATOM   2141  CB  PRO A 277      52.197  42.009   1.841  1.00 24.88           C
ATOM   2142  CG  PRO A 277      52.212  40.533   1.493  1.00 27.34           C
ATOM   2143  CD  PRO A 277      53.666  40.187   1.689  1.00 26.47           C
ATOM   2144  N   ASP A 278      51.600  42.930   4.845  1.00 24.02           N
ATOM   2145  CA  ASP A 278      50.682  42.893   5.977  1.00 26.81           C
ATOM   2146  C   ASP A 278      49.282  43.040   5.405  1.00 28.35           C
ATOM   2147  O   ASP A 278      49.119  43.320   4.223  1.00 31.68           O
ATOM   2148  CB  ASP A 278      50.917  44.084   6.915  1.00 24.95           C
ATOM   2149  CG  ASP A 278      52.233  44.016   7.652  1.00 28.08           C
ATOM   2150  OD1 ASP A 278      52.576  42.939   8.171  1.00 26.38           O
ATOM   2151  OD2 ASP A 278      52.906  45.062   7.748  1.00 30.73           O
ATOM   2152  N   GLY A 279      48.272  42.837   6.242  1.00 33.68           N
ATOM   2153  CA  GLY A 279      46.899  43.028   5.802  1.00 34.70           C
ATOM   2154  C   GLY A 279      46.587  44.472   6.153  1.00 35.18           C
ATOM   2155  O   GLY A 279      47.509  45.293   6.242  1.00 34.19           O
ATOM   2156  N   THR A 280      45.315  44.800   6.372  1.00 36.64           N
ATOM   2157  CA  THR A 280      44.962  46.170   6.744  1.00 35.76           C
ATOM   2158  C   THR A 280      45.652  46.461   8.073  1.00 33.32           C
ATOM   2159  O   THR A 280      45.812  45.568   8.913  1.00 30.89           O
ATOM   2160  CB  THR A 280      43.440  46.366   6.870  1.00 37.03           C
ATOM   2161  OG1 THR A 280      42.885  45.307   7.655  1.00 39.08           O
ATOM   2162  CG2 THR A 280      42.789  46.368   5.494  1.00 44.47           C
ATOM   2163  N   PRO A 281      46.067  47.715   8.279  1.00 31.84           N
ATOM   2164  CA  PRO A 281      46.758  48.159   9.494  1.00 33.45           C
ATOM   2165  C   PRO A 281      45.998  47.947  10.799  1.00 32.57           C
ATOM   2166  O   PRO A 281      46.582  47.593  11.825  1.00 30.86           O
ATOM   2167  CB  PRO A 281      46.964  49.660   9.244  1.00 32.87           C
ATOM   2168  CG  PRO A 281      46.896  49.792   7.760  1.00 35.85           C
ATOM   2169  CD  PRO A 281      45.788  48.859   7.397  1.00 30.62           C
ATOM   2170  N   ARG A 282      44.684  48.107  10.738  1.00 32.42           N
ATOM   2171  CA  ARG A 282      43.871  48.018  11.932  1.00 32.80           C
ATOM   2172  C   ARG A 282      42.470  47.508  11.632  1.00 32.28           C
ATOM   2173  O   ARG A 282      41.882  47.841  10.611  1.00 33.57           O
ATOM   2174  CB  ARG A 282      43.810  49.423  12.528  1.00 32.75           C
ATOM   2175  CG  ARG A 282      43.280  49.512  13.914  1.00 35.87           C
ATOM   2176  CD  ARG A 282      43.615  50.872  14.479  1.00 39.55           C
ATOM   2177  NE  ARG A 282      43.148  51.005  15.851  1.00 40.34           N
ATOM   2178  CZ  ARG A 282      42.346  51.975  16.272  1.00 43.71           C
ATOM   2179  NH1 ARG A 282      41.919  52.907  15.428  1.00 46.70           N
ATOM   2180  NH2 ARG A 282      41.951  52.005  17.534  1.00 42.83           N
ATOM   2181  N   LYS A 283      41.935  46.695  12.528  1.00 32.33           N
ATOM   2182  CA  LYS A 283      40.599  46.168  12.344  1.00 30.30           C
ATOM   2183  C   LYS A 283      39.980  45.854  13.702  1.00 29.85           C
ATOM   2184  O   LYS A 283      40.435  44.954  14.410  1.00 30.61           O
ATOM   2185  CB  LYS A 283      40.660  44.925  11.463  1.00 32.78           C
ATOM   2186  CG  LYS A 283      39.324  44.379  11.027  1.00 42.52           C
ATOM   2187  CD  LYS A 283      39.504  43.137  10.162  1.00 51.26           C
ATOM   2188  CE  LYS A 283      38.177  42.399   9.963  1.00 60.19           C
ATOM   2189  NZ  LYS A 283      38.334  41.071   9.291  1.00 65.48           N
ATOM   2190  N   LEU A 284      39.017  46.674  14.114  1.00 28.22           N
ATOM   2191  CA  LEU A 284      38.316  46.453  15.378  1.00 27.64           C
ATOM   2192  C   LEU A 284      36.933  47.067  15.337  1.00 25.17           C
ATOM   2193  O   LEU A 284      36.687  48.019  14.602  1.00 25.28           O
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ATOM   2194  CB  LEU A 284      39.089  47.003  16.581  1.00 30.86           C
ATOM   2195  CG  LEU A 284      39.007  48.488  16.913  1.00 31.93           C
ATOM   2196  CD1 LEU A 284      39.489  48.700  18.333  1.00 28.99           C
ATOM   2197  CD2 LEU A 284      39.823  49.295  15.925  1.00 33.77           C
ATOM   2198  N   LEU A 285      36.039  46.512  16.147  1.00 25.67           N
ATOM   2199  CA  LEU A 285      34.654  46.956  16.235  1.00 25.49           C
ATOM   2200  C   LEU A 285      34.430  48.072  17.249  1.00 26.97           C
ATOM   2201  O   LEU A 285      35.143  48.183  18.243  1.00 29.98           O
ATOM   2202  CB  LEU A 285      33.749  45.775  16.626  1.00 20.59           C
ATOM   2203  CG  LEU A 285      33.679  44.551  15.727  1.00 18.07           C
ATOM   2204  CD1 LEU A 285      32.670  43.571  16.287  1.00 18.55           C
ATOM   2205  CD2 LEU A 285      33.313  44.969  14.307  1.00 19.07           C
ATOM   2206  N   ASP A 286      33.443  48.908  16.966  1.00 25.74           N
ATOM   2207  CA  ASP A 286      33.043  49.970  17.865  1.00 25.02           C
ATOM   2208  C   ASP A 286      31.951  49.235  18.655  1.00 27.48           C
ATOM   2209  O   ASP A 286      30.944  48.810  18.085  1.00 27.87           O
ATOM   2210  CB  ASP A 286      32.444  51.119  17.051  1.00 29.67           C
ATOM   2211  CG  ASP A 286      32.145  52.356  17.888  1.00 30.80           C
ATOM   2212  OD1 ASP A 286      31.699  52.211  19.047  1.00 30.18           O
ATOM   2213  OD2 ASP A 286      32.345  53.475  17.369  1.00 33.63           O
ATOM   2214  N   VAL A 287      32.179  49.020  19.946  1.00 28.04           N
ATOM   2215  CA  VAL A 287      31.216  48.300  20.772  1.00 26.46           C
ATOM   2216  C   VAL A 287      30.351  49.170  21.685  1.00 28.22           C
ATOM   2217  O   VAL A 287      29.706  48.663  22.604  1.00 28.73           O
ATOM   2218  CB  VAL A 287      31.921  47.203  21.592  1.00 28.80           C
ATOM   2219  CG1 VAL A 287      32.386  46.085  20.673  1.00 27.14           C
ATOM   2220  CG2 VAL A 287      33.115  47.796  22.335  1.00 30.54           C
ATOM   2221  N   THR A 288      30.317  50.469  21.393  1.00 29.45           N
ATOM   2222  CA  THR A 288      29.530  51.457  22.139  1.00 28.93           C
ATOM   2223  C   THR A 288      28.095  51.009  22.403  1.00 29.89           C
ATOM   2224  O   THR A 288      27.609  51.082  23.523  1.00 33.99           O
ATOM   2225  CB  THR A 288      29.464  52.773  21.351  1.00 30.33           C
ATOM   2226  OG1 THR A 288      30.765  53.362  21.300  1.00 31.23           O
ATOM   2227  CG2 THR A 288      28.485  53.745  21.986  1.00 33.85           C
ATOM   2228  N   ARG A 289      27.422  50.563  21.349  1.00 31.29           N
ATOM   2229  CA  ARG A 289      26.041  50.106  21.410  1.00 27.57           C
ATOM   2230  C   ARG A 289      25.892  48.954  22.401  1.00 28.89           C
ATOM   2231  O   ARG A 289      24.980  48.938  23.225  1.00 28.88           O
ATOM   2232  CB  ARG A 289      25.596  49.684  19.998  1.00 28.19           C
ATOM   2233  CG  ARG A 289      24.106  49.499  19.794  1.00 30.70           C
ATOM   2234  CD  ARG A 289      23.759  49.032  18.368  1.00 30.53           C
ATOM   2235  NE  ARG A 289      23.427  50.119  17.435  1.00 28.79           N
ATOM   2236  CZ  ARG A 289      22.697  49.958  16.325  1.00 33.43           C
ATOM   2237  NH1 ARG A 289      22.223  48.758  16.002  1.00 26.37           N
ATOM   2238  NH2 ARG A 289      22.416  50.997  15.541  1.00 27.95           N
ATOM   2239  N   LEU A 290      26.815  48.005  22.353  1.00 28.72           N
ATOM   2240  CA  LEU A 290      26.760  46.863  23.256  1.00 29.86           C
ATOM   2241  C   LEU A 290      26.981  47.270  24.720  1.00 32.12           C
ATOM   2242  O   LEU A 290      26.317  46.758  25.625  1.00 29.96           O
ATOM   2243  CB  LEU A 290      27.796  45.818  22.850  1.00 27.37           C
ATOM   2244  CG  LEU A 290      27.847  44.589  23.754  1.00 28.20           C
ATOM   2245  CD1 LEU A 290      26.529  43.829  23.669  1.00 24.01           C
ATOM   2246  CD2 LEU A 290      29.039  43.716  23.383  1.00 30.47           C
ATOM   2247  N   HIS A 291      27.944  48.160  24.942  1.00 33.23           N
ATOM   2248  CA  HIS A 291      28.260  48.633  26.284  1.00 35.06           C
ATOM   2249  C   HIS A 291      27.086  49.391  26.881  1.00 38.47           C
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ATOM   2250  O   HIS A 291      26.749  49.188  28.048  1.00 39.97           O
ATOM   2251  CB  HIS A 291      29.527  49.488  26.260  1.00 33.15           C
ATOM   2252  CG  HIS A 291      30.780  48.688  26.075  1.00 31.57           C
ATOM   2253  ND1 HIS A 291      32.014  49.269  25.862  1.00 31.12           N
ATOM   2254  CD2 HIS A 291      30.993  47.349  26.093  1.00 26.15           C
ATOM   2255  CE1 HIS A 291      32.929  48.321  25.759  1.00 28.83           C
ATOM   2256  NE2 HIS A 291      32.337  47.146  25.895  1.00 26.04           N
ATOM   2257  N   GLN A 292      26.442  50.228  26.070  1.00 39.16           N
ATOM   2258  CA  GLN A 292      25.277  50.971  26.521  1.00 40.91           C
ATOM   2259  C   GLN A 292      24.144  50.006  26.866  1.00 39.45           C
ATOM   2260  O   GLN A 292      23.234  50.363  27.602  1.00 40.15           O
ATOM   2261  CB  GLN A 292      24.832  51.982  25.469  1.00 43.44           C
ATOM   2262  CG  GLN A 292      25.754  53.198  25.388  1.00 52.40           C
ATOM   2263  CD  GLN A 292      25.402  54.153  24.244  1.00 59.03           C
ATOM   2264  OE1 GLN A 292      25.792  55.326  24.262  1.00 56.68           O
ATOM   2265  NE2 GLN A 292      24.683  53.649  23.234  1.00 60.31           N
ATOM   2266  N   LEU A 293      24.207  48.785  26.342  1.00 35.80           N
ATOM   2267  CA  LEU A 293      23.201  47.770  26.648  1.00 33.79           C
ATOM   2268  C   LEU A 293      23.589  47.050  27.938  1.00 32.96           C
ATOM   2269  O   LEU A 293      22.982  46.038  28.317  1.00 31.15           O
ATOM   2270  CB  LEU A 293      23.068  46.762  25.505  1.00 37.70           C
ATOM   2271  CG  LEU A 293      22.405  47.261  24.220  1.00 39.73           C
ATOM   2272  CD1 LEU A 293      22.355  46.133  23.208  1.00 38.38           C
ATOM   2273  CD2 LEU A 293      21.006  47.763  24.523  1.00 39.00           C
ATOM   2274  N   GLY A 294      24.657  47.546  28.562  1.00 33.74           N
ATOM   2275  CA  GLY A 294      25.134  47.010  29.824  1.00 33.64           C
ATOM   2276  C   GLY A 294      25.938  45.726  29.845  1.00 33.85           C
ATOM   2277  O   GLY A 294      25.933  45.015  30.845  1.00 34.52           O
ATOM   2278  N   TRP A 295      26.609  45.398  28.755  1.00 32.16           N
ATOM   2279  CA  TRP A 295      27.408  44.190  28.750  1.00 31.06           C
ATOM   2280  C   TRP A 295      28.860  44.543  28.504  1.00 33.48           C
ATOM   2281  O   TRP A 295      29.166  45.436  27.703  1.00 35.95           O
ATOM   2282  CB  TRP A 295      26.923  43.204  27.694  1.00 28.54           C
ATOM   2283  CG  TRP A 295      27.612  41.877  27.781  1.00 28.85           C
ATOM   2284  CD1 TRP A 295      27.207  40.787  28.500  1.00 27.38           C
ATOM   2285  CD2 TRP A 295      28.821  41.492  27.115  1.00 26.45           C
ATOM   2286  NE1 TRP A 295      28.086  39.746  28.317  1.00 29.99           N
ATOM   2287  CE2 TRP A 295      29.087  40.152  27.473  1.00 27.63           C
ATOM   2288  CE3 TRP A 295      29.705  42.151  26.250  1.00 27.48           C
ATOM   2289  CZ2 TRP A 295      30.199  39.455  26.996  1.00 27.35           C
ATOM   2290  CZ3 TRP A 295      30.809  41.461  25.777  1.00 24.03           C
ATOM   2291  CH2 TRP A 295      31.047  40.125  26.150  1.00 26.27           C
ATOM   2292  N   TYR A 296      29.744  43.862  29.231  1.00 34.38           N
ATOM   2293  CA  TYR A 296      31.193  44.048  29.120  1.00 35.36           C
ATOM   2294  C   TYR A 296      31.860  42.676  29.177  1.00 33.09           C
ATOM   2295  O   TYR A 296      31.389  41.780  29.887  1.00 34.22           O
ATOM   2296  CB  TYR A 296      31.714  44.935  30.248  1.00 40.18           C
ATOM   2297  CG  TYR A 296      31.374  46.395  30.079  1.00 50.05           C
ATOM   2298  CD1 TYR A 296      30.115  46.907  30.459  1.00 53.98           C
ATOM   2299  CD2 TYR A 296      32.311  47.280  29.547  1.00 55.96           C
ATOM   2300  CE1 TYR A 296      29.796  48.279  30.309  1.00 54.98           C
ATOM   2301  CE2 TYR A 296      32.009  48.656  29.397  1.00 62.81           C
ATOM   2302  CZ  TYR A 296      30.753  49.149  29.780  1.00 62.09           C
ATOM   2303  OH  TYR A 296      30.495  50.508  29.637  1.00 65.44           O
ATOM   2304  N   HIS A 297      32.918  42.494  28.393  1.00 30.63           N
ATOM   2305  CA  HIS A 297      33.610  41.212  28.361  1.00 31.80           C
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ATOM   2306  C   HIS A 297      34.381  40.981  29.646  1.00 34.68           C
ATOM   2307  O   HIS A 297      34.793  41.939  30.301  1.00 34.73           O
ATOM   2308  CB  HIS A 297      34.546  41.131  27.153  1.00 30.86           C
ATOM   2309  CG  HIS A 297      35.690  42.092  27.201  1.00 28.35           C
ATOM   2310  ND1 HIS A 297      35.525  43.451  27.047  1.00 29.18           N
ATOM   2311  CD2 HIS A 297      37.021  41.888  27.348  1.00 26.24           C
ATOM   2312  CE1 HIS A 297      36.707  44.042  27.090  1.00 29.09           C
ATOM   2313  NE2 HIS A 297      37.631  43.116  27.270  1.00 27.00           N
ATOM   2314  N   GLU A 298      34.576  39.712  30.001  1.00 36.49           N
ATOM   2315  CA  GLU A 298      35.291  39.359  31.224  1.00 39.20           C
ATOM   2316  C   GLU A 298      36.640  38.670  31.025  1.00 38.33           C
ATOM   2317  O   GLU A 298      37.541  38.820  31.854  1.00 40.37           O
ATOM   2318  CB  GLU A 298      34.401  38.496  32.118  1.00 43.73           C
ATOM   2319  CG  GLU A 298      33.212  39.255  32.691  1.00 54.47           C
ATOM   2320  CD  GLU A 298      32.333  38.393  33.572  1.00 62.13           C
ATOM   2321  OE1 GLU A 298      32.677  38.215  34.757  1.00 69.61           O
ATOM   2322  OE2 GLU A 298      31.296  37.894  33.082  1.00 67.17           O
ATOM   2323  N   ILE A 299      36.787  37.946  29.917  1.00 34.09           N
ATOM   2324  CA  ILE A 299      38.017  37.212  29.623  1.00 29.73           C
ATOM   2325  C   ILE A 299      39.085  38.013  28.882  1.00 30.13           C
ATOM   2326  O   ILE A 299      38.877  38.452  27.750  1.00 28.81           O
ATOM   2327  CB  ILE A 299      37.695  35.927  28.847  1.00 26.83           C
ATOM   2328  CG1 ILE A 299      36.671  35.105  29.638  1.00 25.09           C
ATOM   2329  CG2 ILE A 299      38.955  35.121  28.607  1.00 25.20           C
ATOM   2330  CD1 ILE A 299      36.083  33.923  28.887  1.00 24.90           C
ATOM   2331  N   SER A 300      40.223  38.221  29.542  1.00 29.20           N
ATOM   2332  CA  SER A 300      41.336  38.960  28.940  1.00 31.21           C
ATOM   2333  C   SER A 300      42.101  38.031  27.993  1.00 27.93           C
ATOM   2334  O   SER A 300      41.991  36.806  28.091  1.00 28.16           O
ATOM   2335  CB  SER A 300      42.288  39.477  30.011  1.00 30.68           C
ATOM   2336  OG  SER A 300      43.035  38.401  30.554  1.00 37.72           O
ATOM   2337  N   LEU A 301      42.914  38.616  27.118  1.00 29.27           N
ATOM   2338  CA  LEU A 301      43.660  37.830  26.147  1.00 28.41           C
ATOM   2339  C   LEU A 301      44.555  36.755  26.765  1.00 29.72           C
ATOM   2340  O   LEU A 301      44.427  35.578  26.430  1.00 26.84           O
ATOM   2341  CB  LEU A 301      44.477  38.737  25.226  1.00 26.68           C
ATOM   2342  CG  LEU A 301      45.114  37.992  24.043  1.00 31.59           C
ATOM   2343  CD1 LEU A 301      44.048  37.488  23.059  1.00 23.42           C
ATOM   2344  CD2 LEU A 301      46.108  38.889  23.342  1.00 31.43           C
ATOM   2345  N   GLU A 302      45.419  37.149  27.699  1.00 32.41           N
ATOM   2346  CA  GLU A 302      46.342  36.207  28.333  1.00 34.56           C
ATOM   2347  C   GLU A 302      45.588  35.062  28.992  1.00 30.36           C
ATOM   2348  O   GLU A 302      45.946  33.894  28.819  1.00 30.83           O
ATOM   2349  CB  GLU A 302      47.230  36.904  29.374  1.00 40.81           C
ATOM   2350  CG  GLU A 302      47.716  38.304  28.999  1.00 53.90           C
ATOM   2351  CD  GLU A 302      46.658  39.396  29.233  1.00 61.33           C
ATOM   2352  OE1 GLU A 302      46.114  39.478  30.364  1.00 69.14           O
ATOM   2353  OE2 GLU A 302      46.378  40.176  28.292  1.00 59.33           O
ATOM   2354  N   ALA A 303      44.528  35.400  29.724  1.00 25.74           N
ATOM   2355  CA  ALA A 303      43.721  34.403  30.417  1.00 26.04           C
ATOM   2356  C   ALA A 303      43.018  33.467  29.441  1.00 27.06           C
ATOM   2357  O   ALA A 303      43.020  32.245  29.629  1.00 29.26           O
ATOM   2358  CB  ALA A 303      42.705  35.085  31.316  1.00 28.61           C
ATOM   2359  N   GLY A 304      42.427  34.043  28.395  1.00 25.61           N
ATOM   2360  CA  GLY A 304      41.734  33.239  27.404  1.00 23.96           C
ATOM   2361  C   GLY A 304      42.670  32.337  26.618  1.00 24.21           C
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ATOM   2362  O   GLY A 304      42.295  31.222  26.256  1.00 26.25           O
ATOM   2363  N   LEU A 305      43.869  32.826  26.313  1.00 21.49           N
ATOM   2364  CA  LEU A 305      44.838  32.028  25.575  1.00 23.50           C
ATOM   2365  C   LEU A 305      45.334  30.869  26.437  1.00 25.40           C
ATOM   2366  O   LEU A 305      45.514  29.749  25.951  1.00 25.77           O
ATOM   2367  CB  LEU A 305      46.013  32.890  25.108  1.00 20.66           C
ATOM   2368  CG  LEU A 305      45.767  33.845  23.932  1.00 21.57           C
ATOM   2369  CD1 LEU A 305      47.020  34.674  23.696  1.00 21.15           C
ATOM   2370  CD2 LEU A 305      45.395  33.060  22.671  1.00 18.05           C
ATOM   2371  N   ALA A 306      45.499  31.125  27.730  1.00 24.54           N
ATOM   2372  CA  ALA A 306      45.960  30.097  28.644  1.00 23.79           C
ATOM   2373  C   ALA A 306      44.933  28.971  28.757  1.00 25.59           C
ATOM   2374  O   ALA A 306      45.272  27.797  28.577  1.00 25.94           O
ATOM   2375  CB  ALA A 306      46.253  30.706  30.003  1.00 23.60           C
ATOM   2376  N   SER A 307      43.670  29.317  28.997  1.00 24.96           N
ATOM   2377  CA  SER A 307      42.639  28.287  29.114  1.00 27.12           C
ATOM   2378  C   SER A 307      42.399  27.528  27.812  1.00 26.46           C
ATOM   2379  O   SER A 307      42.161  26.321  27.826  1.00 29.90           O
ATOM   2380  CB  SER A 307      41.323  28.877  29.630  1.00 28.44           C
ATOM   2381  OG  SER A 307      40.778  29.784  28.698  1.00 36.72           O
ATOM   2382  N   THR A 308      42.445  28.235  26.686  1.00 24.13           N
ATOM   2383  CA  THR A 308      42.248  27.611  25.377  1.00 22.38           C
ATOM   2384  C   THR A 308      43.374  26.616  25.101  1.00 24.13           C
ATOM   2385  O   THR A 308      43.148  25.560  24.497  1.00 24.33           O
ATOM   2386  CB  THR A 308      42.266  28.665  24.250  1.00 22.43           C
ATOM   2387  OG1 THR A 308      41.265  29.649  24.503  1.00 22.70           O
ATOM   2388  CG2 THR A 308      42.010  28.027  22.906  1.00 18.35           C
ATOM   2389  N   TYR A 309      44.597  26.980  25.495  1.00 23.34           N
ATOM   2390  CA  TYR A 309      45.747  26.106  25.289  1.00 24.73           C
ATOM   2391  C   TYR A 309      45.553  24.841  26.108  1.00 25.93           C
ATOM   2392  O   TYR A 309      45.863  23.735  25.661  1.00 24.21           O
ATOM   2393  CB  TYR A 309      47.051  26.787  25.708  1.00 23.65           C
ATOM   2394  CG  TYR A 309      48.265  25.944  25.369  1.00 23.63           C
ATOM   2395  CD1 TYR A 309      48.440  25.435  24.082  1.00 17.42           C
ATOM   2396  CD2 TYR A 309      49.219  25.631  26.343  1.00 23.50           C
ATOM   2397  CE1 TYR A 309      49.523  24.636  23.770  1.00 20.00           C
ATOM   2398  CE2 TYR A 309      50.317  24.832  26.039  1.00 20.93           C
ATOM   2399  CZ  TYR A 309      50.464  24.339  24.753  1.00 22.40           C
ATOM   2400  OH  TYR A 309      51.563  23.565  24.449  1.00 22.20           O
ATOM   2401  N   GLN A 310      45.022  25.032  27.308  1.00 28.53           N
ATOM   2402  CA  GLN A 310      44.734  23.946  28.226  1.00 33.36           C
ATOM   2403  C   GLN A 310      43.758  22.995  27.557  1.00 32.66           C
ATOM   2404  O   GLN A 310      43.948  21.785  27.582  1.00 33.85           O
ATOM   2405  CB  GLN A 310      44.127  24.511  29.512  1.00 37.18           C
ATOM   2406  CG  GLN A 310      44.298  23.620  30.707  1.00 50.41           C
ATOM   2407  CD  GLN A 310      45.710  23.086  30.805  1.00 58.52           C
ATOM   2408  OE1 GLN A 310      45.917  21.874  30.906  1.00 63.71           O
ATOM   2409  NE2 GLN A 310      46.698  23.985  30.725  1.00 57.85           N
ATOM   2410  N   TRP A 311      42.729  23.553  26.924  1.00 31.37           N
ATOM   2411  CA  TRP A 311      41.740  22.736  26.232  1.00 31.73           C
ATOM   2412  C   TRP A 311      42.400  21.992  25.075  1.00 32.46           C
ATOM   2413  O   TRP A 311      42.123  20.813  24.849  1.00 31.54           O
ATOM   2414  CB  TRP A 311      40.587  23.601  25.703  1.00 30.57           C
ATOM   2415  CG  TRP A 311      39.517  22.801  25.001  1.00 29.79           C
ATOM   2416  CD1 TRP A 311      38.413  22.237  25.573  1.00 27.34           C
ATOM   2417  CD2 TRP A 311      39.480  22.432  23.612  1.00 28.75           C
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ATOM   2418  NE1 TRP A 311      37.700  21.534  24.634  1.00 30.55           N
ATOM   2419  CE2 TRP A 311      38.332  21.635  23.423  1.00 28.31           C
ATOM   2420  CE3 TRP A 311      40.309  22.692  22.513  1.00 28.78           C
ATOM   2421  CZ2 TRP A 311      37.990  21.094  22.182  1.00 27.50           C
ATOM   2422  CZ3 TRP A 311      39.969  22.153  21.277  1.00 28.41           C
ATOM   2423  CH2 TRP A 311      38.818  21.361  21.124  1.00 28.72           C
ATOM   2424  N   PHE A 312      43.236  22.700  24.314  1.00 34.36           N
ATOM   2425  CA  PHE A 312      43.937  22.099  23.183  1.00 31.18           C
ATOM   2426  C   PHE A 312      44.772  20.900  23.632  1.00 31.72           C
ATOM   2427  O   PHE A 312      44.818  19.889  22.935  1.00 31.35           O
ATOM   2428  CB  PHE A 312      44.828  23.128  22.476  1.00 30.31           C
ATOM   2429  CG  PHE A 312      45.718  22.525  21.429  1.00 32.10           C
ATOM   2430  CD1 PHE A 312      45.199  22.123  20.202  1.00 31.83           C
ATOM   2431  CD2 PHE A 312      47.065  22.294  21.695  1.00 31.95           C
ATOM   2432  CE1 PHE A 312      46.004  21.496  19.257  1.00 32.03           C
ATOM   2433  CE2 PHE A 312      47.881  21.666  20.755  1.00 32.49           C
ATOM   2434  CZ  PHE A 312      47.348  21.267  19.536  1.00 30.56           C
ATOM   2435  N   LEU A 313      45.423  21.018  24.792  1.00 32.90           N
ATOM   2436  CA  LEU A 313      46.251  19.941  25.348  1.00 35.33           C
ATOM   2437  C   LEU A 313      45.438  18.686  25.654  1.00 39.37           C
ATOM   2438  O   LEU A 313      45.838  17.589  25.277  1.00 43.86           O
ATOM   2439  CB  LEU A 313      46.985  20.402  26.614  1.00 29.47           C
ATOM   2440  CG  LEU A 313      48.115  21.404  26.367  1.00 31.09           C
ATOM   2441  CD1 LEU A 313      48.681  21.951  27.681  1.00 30.88           C
ATOM   2442  CD2 LEU A 313      49.199  20.734  25.549  1.00 25.52           C
ATOM   2443  N   GLU A 314      44.287  18.844  26.301  1.00 40.93           N
ATOM   2444  CA  GLU A 314      43.435  17.699  26.629  1.00 45.11           C
ATOM   2445  C   GLU A 314      42.701  17.094  25.425  1.00 45.39           C
ATOM   2446  O   GLU A 314      42.173  15.986  25.515  1.00 47.44           O
ATOM   2447  CB  GLU A 314      42.415  18.097  27.692  1.00 47.07           C
ATOM   2448  CG  GLU A 314      43.040  18.467  29.026  1.00 57.79           C
ATOM   2449  CD  GLU A 314      42.120  19.304  29.912  1.00 65.44           C
ATOM   2450  OE1 GLU A 314      40.970  19.592  29.496  1.00 68.79           O
ATOM   2451  OE2 GLU A 314      42.560  19.687  31.023  1.00 66.78           O
ATOM   2452  N   ASN A 315      42.703  17.803  24.297  1.00 45.89           N
ATOM   2453  CA  ASN A 315      42.005  17.357  23.090  1.00 45.86           C
ATOM   2454  C   ASN A 315      42.854  17.296  21.844  1.00 48.77           C
ATOM   2455  O   ASN A 315      42.306  17.281  20.746  1.00 48.12           O
ATOM   2456  CB  ASN A 315      40.854  18.313  22.779  1.00 42.56           C
ATOM   2457  CG  ASN A 315      39.694  18.154  23.722  1.00 44.51           C
ATOM   2458  OD1 ASN A 315      38.801  17.341  23.480  1.00 47.00           O
ATOM   2459  ND2 ASN A 315      39.691  18.929  24.805  1.00 41.62           N
ATOM   2460  N   GLN A 316      44.174  17.260  21.981  1.00 54.60           N
ATOM   2461  CA  GLN A 316      45.001  17.262  20.783  1.00 60.89           C
ATOM   2462  C   GLN A 316      44.868  16.057  19.876  1.00 65.27           C
ATOM   2463  O   GLN A 316      45.147  16.154  18.679  1.00 64.36           O
ATOM   2464  CB  GLN A 316      46.462  17.574  21.098  1.00 61.05           C
ATOM   2465  CG  GLN A 316      47.113  16.679  22.107  1.00 64.04           C
ATOM   2466  CD  GLN A 316      48.530  17.120  22.405  1.00 65.48           C
ATOM   2467  OE1 GLN A 316      48.908  17.270  23.566  1.00 68.59           O
ATOM   2468  NE2 GLN A 316      49.318  17.348  21.357  1.00 64.15           N
ATOM   2469  N   ASP A 317      44.434  14.927  20.429  1.00 72.08           N
ATOM   2470  CA  ASP A 317      44.246  13.735  19.609  1.00 78.25           C
ATOM   2471  C   ASP A 317      42.868  13.786  18.958  1.00 78.45           C
ATOM   2472  O   ASP A 317      41.992  12.963  19.218  1.00 80.17           O
ATOM   2473  CB  ASP A 317      44.465  12.449  20.414  1.00 83.68           C
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ATOM   2474  CG  ASP A 317      45.946  12.063  20.507  1.00 90.68           C
ATOM   2475  OD1 ASP A 317      46.638  12.059  19.458  1.00 92.54           O
ATOM   2476  OD2 ASP A 317      46.421  11.768  21.627  1.00 93.21           O
ATOM   2477  N   ARG A 318      42.705  14.820  18.137  1.00 77.70           N
ATOM   2478  CA  ARG A 318      41.497  15.112  17.382  1.00 75.61           C
ATOM   2479  C   ARG A 318      41.939  15.927  16.175  1.00 75.20           C
ATOM   2480  O   ARG A 318      41.203  16.055  15.201  1.00 75.42           O
ATOM   2481  CB  ARG A 318      40.536  15.959  18.221  1.00 75.26           C
ATOM   2482  CG  ARG A 318      39.842  15.205  19.343  1.00 77.60           C
ATOM   2483  CD  ARG A 318      39.106  16.144  20.277  1.00 78.29           C
ATOM   2484  NE  ARG A 318      38.238  17.068  19.555  1.00 79.00           N
ATOM   2485  CZ  ARG A 318      37.060  17.493  20.002  1.00 81.81           C
ATOM   2486  NH1 ARG A 318      36.598  17.071  21.174  1.00 80.59           N
ATOM   2487  NH2 ARG A 318      36.349  18.358  19.284  1.00 83.39           N
ATOM   2488  N   PHE A 319      43.164  16.449  16.242  1.00 75.08           N
ATOM   2489  CA  PHE A 319      43.725  17.283  15.180  1.00 75.74           C
ATOM   2490  C   PHE A 319      44.998  16.697  14.568  1.00 76.51           C
ATOM   2491  O   PHE A 319      45.786  16.036  15.249  1.00 78.34           O
ATOM   2492  CB  PHE A 319      44.002  18.689  15.729  1.00 71.11           C
ATOM   2493  CG  PHE A 319      42.868  19.253  16.545  1.00 64.16           C
ATOM   2494  CD1 PHE A 319      41.722  19.748  15.926  1.00 63.29           C
ATOM   2495  CD2 PHE A 319      42.931  19.257  17.932  1.00 62.48           C
ATOM   2496  CE1 PHE A 319      40.655  20.235  16.677  1.00 58.54           C
ATOM   2497  CE2 PHE A 319      41.870  19.742  18.691  1.00 59.47           C
ATOM   2498  CZ  PHE A 319      40.731  20.230  18.060  1.00 59.31           C
TER    2499      PHE A 319
HETATM 2500  PA  NDP   350      31.378  25.685  13.295  1.00 39.92           P
HETATM 2501  O1A NDP   350      31.601  25.112  11.921  1.00 40.37           O
HETATM 2502  O2A NDP   350      32.127  25.087  14.439  1.00 43.08           O
HETATM 2503  O5B NDP   350      29.740  25.667  13.540  1.00 45.66           O
HETATM 2504  C5B NDP   350      28.803  25.387  12.475  1.00 45.22           C
HETATM 2505  C4B NDP   350      27.915  24.283  12.982  1.00 44.58           C
HETATM 2506  O4B NDP   350      26.758  24.238  12.121  1.00 45.73           O
HETATM 2507  C3B NDP   350      28.570  22.930  12.915  1.00 46.90           C
HETATM 2508  O3B NDP   350      28.379  22.200  14.150  1.00 44.41           O
HETATM 2509  C2B NDP   350      27.873  22.251  11.797  1.00 50.09           C
HETATM 2510  O2B NDP   350      27.749  20.846  12.037  1.00 57.56           O
HETATM 2511  C1B NDP   350      26.505  22.869  11.776  1.00 46.31           C
HETATM 2512  N9A NDP   350      25.904  22.762  10.410  1.00 43.32           N
HETATM 2513  C8A NDP   350      26.370  23.307   9.205  1.00 41.14           C
HETATM 2514  N7A NDP   350      25.604  22.998   8.183  1.00 39.98           N
HETATM 2515  C5A NDP   350      24.577  22.209   8.729  1.00 41.32           C
HETATM 2516  C6A NDP   350      23.458  21.570   8.143  1.00 39.28           C
HETATM 2517  N6A NDP   350      23.220  21.652   6.839  1.00 38.37           N
HETATM 2518  N1A NDP   350      22.619  20.854   8.960  1.00 37.10           N
HETATM 2519  C2A NDP   350      22.878  20.771  10.285  1.00 35.41           C
HETATM 2520  N3A NDP   350      23.906  21.334  10.921  1.00 39.29           N
HETATM 2521  C4A NDP   350      24.736  22.052  10.071  1.00 42.99           C
HETATM 2522  O3  NDP   350      31.556  27.288  13.242  1.00 44.66           O
HETATM 2523  PN  NDP   350      31.582  28.531  14.298  1.00 43.69           P
HETATM 2524  O1N NDP   350      33.062  28.877  14.499  1.00 49.09           O
HETATM 2525  O2N NDP   350      30.824  28.053  15.546  1.00 44.22           O
HETATM 2526  O5D NDP   350      30.825  29.778  13.588  1.00 49.81           O
HETATM 2527  C5D NDP   350      29.393  30.023  13.765  1.00 49.70           C
HETATM 2528  C4D NDP   350      29.117  31.490  13.397  1.00 52.69           C
HETATM 2529  O4D NDP   350      29.878  32.322  14.321  1.00 51.50           O
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HETATM 2530  C3D NDP   350      29.670  31.869  12.017  1.00 53.64           C
HETATM 2531  O3D NDP   350      28.765  31.573  10.919  1.00 51.66           O
HETATM 2532  C2D NDP   350      29.951  33.358  12.131  1.00 54.32           C
HETATM 2533  O2D NDP   350      28.803  34.072  11.689  1.00 58.59           O
HETATM 2534  C1D NDP   350      30.257  33.550  13.670  1.00 53.87           C
HETATM 2535  N1N NDP   350      31.701  33.821  13.853  1.00 53.91           N
HETATM 2536  C2N NDP   350      32.548  32.699  13.879  1.00 55.72           C
HETATM 2537  C3N NDP   350      33.904  32.883  14.335  1.00 57.36           C
HETATM 2538  C7N NDP   350      34.932  31.902  13.841  1.00 57.68           C
HETATM 2539  O7N NDP   350      36.173  32.209  13.678  1.00 58.57           O
HETATM 2540  N7N NDP   350      34.582  30.620  13.539  1.00 56.32           N
HETATM 2541  C4N NDP   350      34.388  34.223  14.153  1.00 57.26           C
HETATM 2542  C5N NDP   350      33.577  35.299  14.101  1.00 55.62           C
HETATM 2543  C6N NDP   350      32.217  35.102  13.986  1.00 56.29           C
HETATM 2544  P2B NDP   350      28.778  19.751  11.391  1.00 61.04           P
HETATM 2545  O1X NDP   350      30.173  20.260  11.720  1.00 63.55           O
HETATM 2546  O2X NDP   350      28.332  18.492  12.112  1.00 66.12           O
HETATM 2547  O3X NDP   350      28.490  19.771   9.895  1.00 62.71           O
HETATM 2548  O   HOH   403      16.364  46.066   6.360  1.00 16.76           O
HETATM 2549  O   HOH   404      61.658  40.109  15.137  1.00 25.68           O
HETATM 2550  O   HOH   405      37.036  37.869  25.560  1.00 23.88           O
HETATM 2551  O   HOH   406      29.274  45.590   4.227  1.00 23.86           O
HETATM 2552  O   HOH   407      21.659  46.241   9.524  1.00 18.71           O
HETATM 2553  O   HOH   408      11.646  48.055   2.386  1.00 22.28           O
HETATM 2554  O   HOH   409      29.268  46.086   1.340  1.00 23.26           O
HETATM 2555  O   HOH   410      40.720  27.171   4.788  1.00 30.74           O
HETATM 2556  O   HOH   411      40.024  37.346  25.219  1.00 28.20           O
HETATM 2557  O   HOH   412      13.789  45.247   5.947  1.00 17.51           O
HETATM 2558  O   HOH   413       8.740  48.583  12.146  1.00 44.45           O
HETATM 2559  O   HOH   414      55.988  44.603  15.223  1.00 28.70           O
HETATM 2560  O   HOH   415      17.945  32.383  25.916  1.00 35.81           O
HETATM 2561  O   HOH   416      40.988  42.346  21.737  1.00 34.12           O
HETATM 2562  O   HOH   417      33.297  44.433  25.856  1.00 27.77           O
HETATM 2563  O   HOH   418      40.288  42.308  14.121  1.00 27.88           O
HETATM 2564  O   HOH   419      14.468  45.184  12.733  1.00 28.94           O
HETATM 2565  O   HOH   420      21.811  49.737   2.572  1.00 23.93           O
HETATM 2566  O   HOH   421      28.028  47.151  19.950  1.00 27.75           O
HETATM 2567  O   HOH   422      55.299  38.921  30.122  1.00 29.39           O
HETATM 2568  O   HOH   423      20.340  42.878  17.338  1.00 21.51           O
HETATM 2569  O   HOH   424      18.265  41.950  13.529  1.00 23.62           O
HETATM 2570  O   HOH   425      60.926  36.251  20.554  1.00 25.83           O
HETATM 2571  O   HOH   426      61.735  26.288  23.079  1.00 26.19           O
HETATM 2572  O   HOH   427       9.903  49.531  16.011  1.00 35.06           O
HETATM 2573  O   HOH   428       4.961  38.941  16.431  1.00 72.15           O
HETATM 2574  O   HOH   429      25.390  31.475  12.011  1.00 42.29           O
HETATM 2575  O   HOH   430      24.616  36.303  29.371  1.00 39.49           O
HETATM 2576  O   HOH   431      52.396  40.887  10.716  1.00 28.82           O
HETATM 2577  O   HOH   432      28.532  50.476  18.635  1.00 26.51           O
HETATM 2578  O   HOH   433      24.605  31.137   8.299  1.00 37.60           O
HETATM 2579  O   HOH   434      53.396  32.965   9.078  1.00 31.80           O
HETATM 2580  O   HOH   435       8.764  28.089   0.894  1.00 66.40           O
HETATM 2581  O   HOH   436      50.045  45.833  20.737  1.00 51.41           O
HETATM 2582  O   HOH   437      28.349  27.038  16.112  1.00 28.33           O
HETATM 2583  O   HOH   438      48.580  49.249  12.510  1.00 49.01           O
HETATM 2584  O   HOH   439      27.644  51.002  30.138  1.00 83.71           O
HETATM 2585  O   HOH   440      14.915  37.706  20.160  1.00 31.14           O
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HETATM 2586  O   HOH   441      58.871  26.341  28.966  1.00 27.42           O
HETATM 2587  O   HOH   442      30.055  29.232  27.254  1.00 30.49           O
HETATM 2588  O   HOH   443      59.252  29.056  11.253  1.00 37.17           O
HETATM 2589  O   HOH   444      41.062  29.095  19.502  1.00 22.79           O
HETATM 2590  O   HOH   446      27.525  20.951  22.129  1.00 30.42           O
HETATM 2591  O   HOH   447      34.990  42.374   4.139  1.00 34.41           O
HETATM 2592  O   HOH   448      39.767  54.716  10.592  1.00 67.76           O
HETATM 2593  O   HOH   449       6.617  46.118  12.631  1.00 39.16           O
HETATM 2594  O   HOH   450      47.753  26.797  29.529  1.00 39.09           O
HETATM 2595  O   HOH   451      53.355  49.057  15.729  1.00 65.17           O
HETATM 2596  O   HOH   452      57.253  36.231  24.352  1.00 29.82           O
HETATM 2597  O   HOH   453      63.541  27.548  33.259  1.00 49.37           O
HETATM 2598  O   HOH   454      60.669  39.031  18.870  1.00 37.60           O
HETATM 2599  O   HOH   455      14.756  48.579  16.040  1.00 39.67           O
HETATM 2600  O   HOH   456      32.995  53.473  11.966  1.00 32.90           O
HETATM 2601  O   HOH   457      13.273  46.305  15.112  1.00 40.63           O
HETATM 2602  O   HOH   458       1.875  40.301   5.309  1.00 70.50           O
HETATM 2603  O   HOH   459      53.220  19.321  26.913  1.00 56.37           O
HETATM 2604  O   HOH   460      49.920  28.952  30.026  1.00 30.71           O
HETATM 2605  O   HOH   461      33.278  33.241   0.845  1.00 26.77           O
HETATM 2606  O   HOH   462      20.158  49.720   6.382  1.00 47.64           O
HETATM 2607  O   HOH   464      31.011  22.374  24.615  1.00 67.95           O
HETATM 2608  O   HOH   466       9.539  39.483  21.846  1.00 44.82           O
HETATM 2609  O   HOH   467      13.095  16.160  15.545  1.00 68.91           O
HETATM 2610  O   HOH   468      42.058  33.585  15.357  1.00 38.91           O
HETATM 2611  O   HOH   469      55.397  43.765   6.085  1.00 41.18           O
HETATM 2612  O   HOH   470      39.929  31.499  15.426  1.00 36.87           O
HETATM 2613  O   HOH   471      44.997  38.774  11.125  1.00 86.77           O
HETATM 2614  O   HOH   472      63.543  26.568  21.038  1.00 37.23           O
HETATM 2615  O   HOH   473      42.546  49.571   8.745  1.00 52.97           O
HETATM 2616  O   HOH   474      21.212  22.331  14.333  1.00 32.02           O
HETATM 2617  O   HOH   475      63.713  36.784  22.124  1.00 40.38           O
HETATM 2618  O   HOH   476      50.517  20.177  31.519  1.00 45.57           O
HETATM 2619  O   HOH   477      55.053  22.111  23.811  1.00 33.79           O
HETATM 2620  O   HOH   478      25.984  21.019  15.400  1.00 42.73           O
HETATM 2621  O   HOH   479       8.324  32.438  20.518  1.00 45.08           O
HETATM 2622  O   HOH   480      10.617  41.969  25.986  1.00 65.97           O
HETATM 2623  O   HOH   481      33.575  31.406   6.991  1.00 49.37           O
HETATM 2624  O   HOH   482      37.161  42.218  13.370  1.00 49.73           O
HETATM 2625  O   HOH   483      32.721  33.623  10.991  1.00 45.67           O
HETATM 2626  O   HOH   484      31.049  25.089   9.313  1.00 34.65           O
HETATM 2627  O   HOH   485      23.886  20.648  13.709  1.00 38.09           O
HETATM 2628  O   HOH   486      20.562  19.884  12.878  1.00 38.07           O
HETATM 2629  O   HOH   487      20.762  21.629  17.045  1.00 41.39           O
HETATM 2630  O   HOH   488      25.825  18.437  13.712  1.00 48.25           O
HETATM 2631  O   HOH   489      34.918  37.720  12.567  1.00 37.51           O
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CONECT 2543 2535 2542
CONECT 2544 2510 2545 2546 2547
CONECT 2545 2544
CONECT 2546 2544
CONECT 2547 2544
MASTER      285    0    1   13   10    0    0    6 2630    1   48   25
END
```